

Children's Newspaper

Have You Seen the C.N. Monthly?
Ask for My Magazine—Edited by Arthur Mee

The CHILDREN'S NEWSPAPER

AND CHILDREN'S PICTORIAL

The Story of the World Today for the Men and Women of Tomorrow

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WHAT A BRICKLAYER DID

See
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Seven

A HORSE AND A MAN REMARKABLE RACE

The Wonderful Power Men
Have Over the Animal Kingdom

WHY WE WIN AND HOW

The remarkable race between a man and a horse ended in a remarkable victory for the man.

For six days a long-distance runner ran against the horse round a track at the Crystal Palace, and in the end, after changing positions many times, the horseman realised that he was beaten, and the race ended: Man, 345 miles, 880 yards; horse, 337 miles, 1618 yards.

Hart, the runner, is 59, and Nightingall, who rode Country Lassie, is 60. They both did astonishingly well.

The race was a dramatic example of a man's power of endurance, but our Natural Historian here points out, what the runner has pointed out, that the mind of a man counts in things like this.

"I knew what I was doing," says Hart; "the horse did not know what the race was about."

By Our Natural Historian

There was a rather challenging idea behind this interesting race.

Man is one of the feeblest mammals so far as muscular power is concerned, but he is fortified by a brain beyond compare. Does that brain enable him to rise superior to the sustained speed and persistence of the horse? The answer to this question brings us to a realisation of the astounding ascendancy of a man's brain over all the rest of the living world. Of course, animals are stronger than men, many of them infinitely fleet and immeasurably more enduring under great burdens. Yet in the long run we outdo them all. Five Englishmen marched to the South Pole after all their ponies had died; two men marched to the North Pole, where no horse could live.

Allies in Service

Men are constantly crossing and re-crossing Africa, where every domestic animal drops dead under the attacks of flies. We say of the thoroughbred horse that it goes to the last gasp, but it is actually man who does that.

The immense achievement of man is, however, that he has added practically all animal strength to his own. Were we not of superior mental standard to the animals they would be our masters and we their slaves.

Only to ants and men has it occurred to enlist allies for mutual service. The ants necessarily content themselves with the aid and comfort of other insects, in itself a profoundly impressive feat. Man, however, has recruited from nearly every living natural order. Think of his animal servants, daily doing the work of the world. There is the horse, the dog, the cat, the elephant, the camel, many breeds of cattle, goats, sheep, yaks, llamas, mongooses.

Harvest Time Has Come



All over the English countryside the harvesters have been busy at work, and this little helper in Yorkshire finds the wheat sheaves so tall that they are difficult to carry

He has taken a wolf to guard his flocks, and a little tiger to catch his rats and mice. He has converted a polecat into a ferret, and made it the policeman of the rabbit warren. He has taught the cormorant to catch fish for him, the falcons to catch game, the pigeon to bear his messages, the poultry to dwell in his back garden.

He shields the frogs and toads that they may keep an eye on garden grubs; he rears bees that they may fertilise his fruits and pay hive-rent with their wax and honey. He collects the ladybirds and sends them out to stop a plague of greenfly and scale insects. He has lately harnessed the humble bee to service in fertilising red clover.

None of these services is natural to the animals concerned. Providence must have intended the horse, the elephant, and other beasts of burden to haul and carry weights, but man had to teach them their business.

The camel is a desert animal; we make him serve in the crowded Eastern

city as freely as along the caravan routes of the wilderness. The horse never pulls a weight in freedom, yet at a word from a man he hauls ten tons.

The elephant is a monster of the forest and the wooded mountains, yet a native child can make him pick up a pin and a poleaxe one after the other.

We have not only taught animals their lessons; we have blended them from a thousand strains into the wonderful creatures they are. There is not a wild horse worth catching save as a gift for the Zoo. We have built up our horses as we have built up fruits and cereals, as we have fashioned new pigeons from old, a multitude of poultry breeds from a common jungle stock.

We make seals and bears perform, we teach fishes to behave with gentleness to weaker kinds in our aquariums. We shall tame the whale if ever we learn to dive deep enough for long enough.

That is something of what man has done with animals, what his brain has meant in competition with theirs. E. A. B.

2 L.O. AND THE WEATHER

NOTHING TO DO WITH IT

The Little Powers of Man and
the Great Forces of Nature

LESSON OF THE WAR

While the rain was spoiling the August holidays somebody wrote to complain that it was a week since his wife had suggested that broadcasting was upsetting the weather, yet broadcasting had not yet been stopped!

It is extraordinary how people have continually blamed new inventions for the weather. Before wireless came on the scene gunpowder and battles were the chief offenders. We say battles because in Homer there is a suggestion that the clash of arms, the swords and spears rattling on the shields, in a Greek battle, brought on a storm of rain.

Gunpowder and Rain

Since gunpowder came in there has never been a campaign in which it has not been said to be the cause of heavy rain. Though the Great War was often fought in Flanders and in France in wet weather, the heaviest bombardments on the Western Front often continued for rainless days and weeks, and the average rainfall was as usual.

All the war experience confirms the theory that nothing we can do with explosives or disturbances has the slightest effect on weather conditions.

Dr. W. J. Humphries, one of the greatest authorities on the weather, described to the British Association at Toronto the many efforts that have been made to produce rain by artificial means, such as electric discharges, explosions of gunpowder or shells, the use of chemicals, dusting the sky, spraying liquid air on the clouds, and sprinkling the clouds with electrified sand. He believes that not one of these methods was of the slightest use, in spite of much apparent success attending the efforts of certain "rain-makers."

Power of a Tornado

Anything that man can possibly contrive in the way of force is so insignificant when compared with the stupendous forces of Nature, which cause a tornado to scatter rain over a million square miles, or set up a thunderstorm, that it is almost nothing at all. We might as well try to start a storm by striking a match in a room as to cause a tenth of an inch of rain to fall by gunpowder or electricity.

All the horse-power that makes the electricity which drives the trams and tube trains of London and lights its houses would not suffice to move the clouds that float over the city a mile an hour. How much less, then, can the paltry amount of power invested in wireless electricity influence the air and clouds and atmosphere which float in to us across the Atlantic.

EVERY YEAR WE ARE BETTER AND BETTER

THE NATION'S DOCTOR LOOKS ROUND

The Most Wonderful Year in the History of Our Health

EAST-END CATCHING UP THE WEST-END

The nation has been taking stock of itself in the mirror presented by the report of the Chief Medical Officer of the Ministry of Health, Sir George Newman, and the result is something to be delighted with, and perhaps proud of.

We had last year the lowest death-rate ever known in our history; the lowest actual number of deaths ever recorded since 1862; the lowest death-rate for infants ever known. As for London, it is becoming a health resort, and Shoreditch is catching up Hampstead.

Saving the Children

On the whole we are not so bad looking. Our habits are changing for the better. We understand better than we did the importance of keeping both our homes and our bodies clean. We understand that food must be sound and wholesome, that it must also be kept clean and be thoroughly cooked. Our local authorities are more alert, and we are benefiting by the facilities afforded in scavenging, water supply, food inspection, care of the sick, and so on.

Let us look at some of the figures. The death-rate was 11.6 a thousand, a total of 444,786, or 42,000 less than in 1922. The nation saved 45,000 infant lives over and above the average saving in the first ten years of this century; the infant mortality being 69 a thousand. Epidemics and infectious cases numbered 344,183, a decrease of 78,766. On the other hand, the birth-rate was only 19.7 a thousand, 758,131 births being registered, a decrease of 22,000 on 1922, and of 90,000 on 1921.

Losing Twenty Million Weeks

But our Chief Medical Officer utters some warnings. Taking only the statistics of people who were insured against sickness, and without counting the first three days of incapacity for which sickness benefit is not payable, a total of £11,559,000 was paid out to workers.

In 1923 the nation lost, through sickness and disablement, about 20,500,000 weeks of work, enough to cover 394,230 years, or a loss equal to the work of 394,230 people for all the year.

Sir George Newman estimates that the loss of time due to sickness, much or most of which is avoidable, costs us ten times more than we lose through strikes.

In spite of all improvements the science and art of medicine has outstripped our sanitary, poor law, and educational organisation. We need better education in hygiene. We need it in our elementary schools. We need it in the right ordering of our milk and meat supply, in the understanding of food values, in connection with healthy working and living environments.

Fighting Disease

In connection with infectious diseases, the fact that so large a proportion of our child population is unprotected by vaccination against smallpox is regarded as a matter of gravity. There was a considerable decline in the number of deaths from diphtheria, but cancer and smallpox have been increasing.

To fight disease among our work-people we have an army of 12,855 practitioners under the National Insurance Acts, but much depends on the individual, to whom the golden rule is still that prevention is better than cure.

Far back in the history of China we read of a wise man who held that the chief concern of the king should ever be the well-being of his people. The well-being of the people should still be the highest aim of all our governments and rulers, to whom we commend the wise words of the Nation's Doctor.

THE PLEASURE OF TRAVEL FOR ALL

Smoking in Trains

A GOOD IDEA ABANDONED

By a Correspondent

We are very glad to see a protest in the Times against the small number of non-smoking carriages on our trains.

Our new railway managers are doing many good things, but in this respect the railways have gone backward and not forward. It is one of the misfortunes of the amalgamation that the best solution of this problem was abandoned.

This was the solution hit upon by the South-Eastern Railway, which adopted an idea advocated by Bishop Welldon and the C.N.—the idea that, instead of labelling certain carriages SMOKING, a passenger was allowed to smoke unless forbidden by a label NON-SMOKING.

It was found to work very well in practice. The thoughtless smoker who smoked without hesitation in a carriage with no label became thoughtful on finding himself confronted with a positive label against smoking, and it was felt that a satisfactory solution of a bothering problem had been found. Then came the amalgamation of the railways, and in order that all railways should have the same rule the new principle was abandoned.

That is to say, a good idea was abandoned in favour of a bad one, on the plea that it is better to have the same rule everywhere, even if it is a bad one. On that plea the world will never improve at all.

TWO TRAGEDIES

Is the English-speaking Race Going Downhill?

It has been a wonderfully healthy year, and yet from the point of view of those who look a long way forward, the horizon is not free from anxious signs.

These two sentences from a great authority's address at the British Association are worthy of notice. They are the words of Professor McDougall, of Harvard.

As I watch the American people speeding daily down the path that leads to destruction, I seem to be watching one of the greatest tragedies in history.

I fear very seriously that when 200 years hence a list is made of the great nations whose decline is due to deterioration of the human race which composed them, the name of the nation we all love and admire will have to be included. I refer to England.

ENCKE'S COMET

A Little Visitor to the Sun

Encke's Comet, a famous little member of the Sun's family, has just been detected making one of its periodical visits to the Sun.

Mr. Van Biesbrook at the Yerkes Observatory has discovered the comet, still very faint, near the edge of the constellation Taurus.

This comet, which visits the Sun every three years and four months, has been of great service to astronomers in enabling them to weigh the planet Mercury; but in the irregularity of its own movements it has also confronted them with a problem hitherto unsolved.

Later in the year this little visitor may become visible to the naked eye.

A NEW TELESCOPE

For the Southern Sky

It is good news to all astronomers to hear that a large new telescope will soon be erected in South Africa.

There are many interesting objects in the southern heavens which never come above the horizon of the northern observer, and at present large telescopes in southern latitudes are few and far between. The new telescope will have an object-glass 26 inches across, and will first be devoted to measuring the distances of many of the southern stars.

PRISONER IN A CAGE

An Old-time Custom that Should Cease

There is one place in the British Empire (let us hope no more) where a prisoner may still be seen in a cage.

It is in Jersey, where many old customs survive side by side with British institutions. A young widow was convicted of making a false declaration, and was sentenced to £2 fine and a month's imprisonment.

Then she was put in the cage for all to see, the island being crowded with visitors. She is said to have "cried pitifully, and finally collapsed."

The Channel Islands have their own courts and judges and criminal procedure inherited from Norman times, and their language is still a kind of Norman-French. But this particular custom should be abolished at once; it should never have existed under the British flag.

FRANCE'S GRACEFUL MOVE

A Home of Intellectual Cooperation

The Committee on Intellectual Cooperation is one of the most hopeful products of the League of Nations. It has an immense area of useful work before it. But it has no money—only about £1200.

It is delightful to learn, therefore, that the French Government has offered to contribute a sum to provide a building in Paris for an International Institute of Intellectual Cooperation. Needless to say, the offer has been gratefully accepted.

"If the League concerns itself with improving the exchange of material products," said a distinguished Frenchman, M. Leon Bourgeois, "it should surely also study the methods of accelerating the exchange of ideas between nations. Without a spirit of mutual understanding between nations the League cannot live."

It is actions like this of France that give assurance that the League will live. Though France is now showing a great and welcome friendliness to the League, we are apt to think of the French too exclusively as a military people, forgetting how truly they are also a great intellectual people. The new Institute could have no fitter home than in Paris.

A RAILWAY FOR £3000

West Country Track Sold by Auction

An enormous number of tourists in the West Country must have used the little "West Somerset Mineral Railway" to take them the eleven miles up from Watchet, on the coast, into the Brendon Hills. Now it has been sold for £3000.

Some years ago the iron mines were closed. The railway ceased working a few years later, and the railway track became just a convenient footpath up the lovely valley into the hills; and at last it has gone to auction.

One of the six stations, with an acre of land, went for £170. Cottages were sold at £70 a piece, and a mile length of track for £10.

LOOK WIDE

Brothers in Brotherland

By the Chief Scout

Our slogan in the Scout movement is Look Wide. There lies before us yet a wider brotherland even than this Empire of ours.

There are other motherlands besides Great Britain; there is France; there is America and Holland and Denmark—indeed, every civilised country in the world. All these have their sons. These are sons of the one Father, and therefore the world itself is a Brotherland.

It is with this conviction in view that the Boy Scout movement becomes a school of brotherhood on the widest basis.

LOST BOOKS OF LIVY

HAVE THEY BEEN FOUND?

The Great Prose Writer of the Augustan Age

EARLY HISTORY OF ROME

It is reported from Naples that the missing books of the great History of Rome, by Titus Livy, have been discovered. If the report is true, it is the most important addition made to Latin literature for hundreds of years.

Livy was the greatest prose writer of the Augustan age, as Virgil was its greatest poet. His work took forty years to write, but only one quarter of it is known. Of the rest we only know the contents from summaries of the fourth century, compiled from an abridgement then in use, but since lost.

Not so much to give new facts as to make what was already known stand out freshly and vividly in the reader's mind, Livy traces the story of Rome from its mythical beginnings to a few years before the birth of Jesus. In his pages are preserved the old legends, as that of Romulus and Remus. It is Livy who tells us how Horatius held the bridge across the Tiber in the brave days of old. It is Livy who made Roman virtue and prowess the admiration of the world. And Livy made his readers see what he described. But his history is rather like an eloquent funeral oration. His gentle soul, akin to Virgil's, deplored the civil dissensions of his day, and to him, who survived Augustus, the great Empire seemed tottering to its fall.

Pilgrimage to See Livy

Little is known of his life. He was born about 59 B.C., and died in A.D. 17, at Patavium, now known as Pavia. He was at first a teacher of rhetoric. He won the favour of Augustus, and such was his renown that a citizen of Cadiz travelled to Rome merely to look at this great man.

The sort of man he was we gather from his opening words, in which he suggests that two things are against the success of his work—the multitude of previous writers and the legendary character of Rome's early history; but he adds that he will find his reward in the consciousness of having done something for the glory of his country and the distraction of his mind from "a painful present."

That part of his work which is missing deals with the civil wars. Even if the report of its discovery be unfounded, it will have served a useful purpose if it sends the reader back again to the stimulating and picturesque pages of this great Augustan writer.

BOY CHESS WIZARD

A Champion at Twelve

Three years ago a wonderful boy came from Poland to London, and surprised the chess masters by showing that he, at nine, was a master of chess, too.

His name was Samuel Rechevsky. And now, after touring America from east to west, he has become an American citizen, and is famous throughout the United States for his uncanny skill.

But he has not been neglecting other things. In the past two years he has finished his elementary schooling, and has become a fine singer and baseball player. It is often said that chess makes men round-shouldered through stooping at the table, but this little player is well set-up and athletic. He has raised large sums of money for hospitals at Denver, in Colorado, by exhibition games against the best players of America, and has been astonishing the citizens of Detroit by his ability to play and beat half a dozen grown-up players at once.

HOW THEY DO IT IN PERSIA

FROM TROOPER TO RULER
Remarkable Career of a Prime Minister

REBEL AND GENERAL

It would be difficult to find a career in Eastern or Western civilisation that quite matches that of Riza Khan, the Sardar Sipah, Prime Minister of Persia.

It began when he was a private soldier in the Persian Cossack division. Industry, energy, and military capacity soon brought him high military rank, and when it was decided at Kazvin to send a Cossack expedition against the Government, Riza Khan was chosen to lead it.

In due course, Teheran, the Persian capital, was captured and a new Government set up in which Riza was made Minister for War. That was in 1921, and ever since the Sardar Sipah has been virtual ruler of Persia, though allotting the post of Prime Minister to others.

A Disturbance in the City

Riza was a great admirer of Mustapha Kemal Pasha, the soldier who established a republic in Turkey and became its first President. Somehow the idea got about that Riza would have no objection to becoming President of a Persian republic. The young Shah, who seems fonder of Europe than of Persia, was not popular. So at the request of military officers in the provinces, merchants, and others began sending in telegrams, asking for a republic.

It became widely expected that on the last Persian New Year's Day, March 21, a republic would be proclaimed by the Persian Parliament, the Mejlis. But the priesthood had taken fright. Judging republics by those in Russia and Turkey, they decided that they were not good for priestly rule, which is very powerful in Persia. They made a disturbance in Parliament, which spread to the city.

First Minister of the Shah

The Sardar Sipah, after a conference with the priest-magistrates at Kum, issued a proclamation making it illegal to advocate a republic. This annoyed the Mejlis, and Riza resigned and left the capital. Rumours that the provincial military commanders were about to march on Teheran, so frightened the Mejlis that it invited Riza back again.

Then came the crowning marvel. This man who would be President of a Persian republic received a telegram from the Shah himself asking him to resume the Premiership; and so Riza Khan, the Sardar Sipah, ex-Cossack trooper and sometime rebel general, again rules Persia—not as President of a republic but, none the less effectively, as First Minister of the Shah.

A LIBRARY OF SAND

2800 Bottles Full

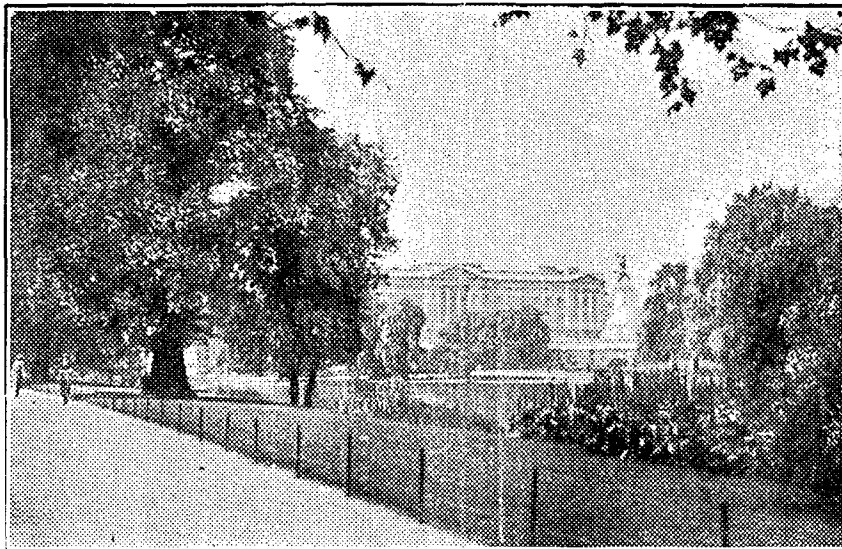
The old world had its libraries of bricks. We have our libraries of sand.

The Structural Materials Library at the Lewis Institute, Chicago, has in its collection a set of specimens of sands gathered from all over the world.

There are 2800 kinds, all kept in bottles, and the collection is constantly being added to. Nowhere else is there such a complete collection, and its purpose is to enable tests to be made, and values determined, in connection with cement and mortar work.

Each bottle has attached to it a label recording its source, an analysis of the sand, the result of chemical tests, and so on.

THE PADDLERS BY THE PALACE



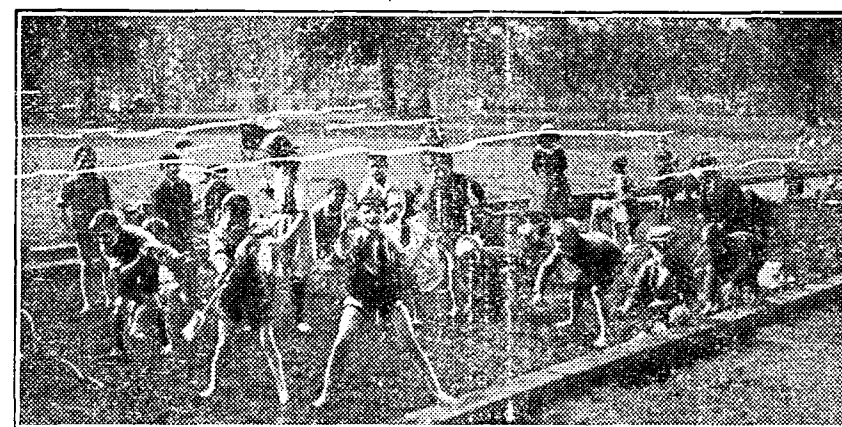
Buckingham Palace seen from near the children's playground



A happy party on the see-saw



A jolly paddle in the lake



At play in the sand-pit

A playground for the children has just been arranged in St. James's Park within sight of Buckingham Palace, and these pictures show the boys and girls having a jolly time in the paddling place and sand-pit set aside exclusively for their use

THE MAYA KING'S THRONE

Wonderful Discoveries in
the Tropical Forest

A STONE LIBRARY 7000
YEARS OLD

In Mexico and Yucatan scientific men are finding almost every day something far more wonderful than the Spanish conquistadores did when they ravaged the cities and treasures of the Aztecs. The latest discovery is that of the throne of the king who ruled the Maya Empire in the city of Chichen Itza, twenty miles from Valladolid, Yucatan.

Exploration of these ancient relics of the Maya civilisation, which was already two thousand years old when the Spaniards first gazed on what was left of it, is the most exciting and wonderful pursuit. The country is covered with great tropical forests, and anyone riding through them continually comes on huge fragments of palaces and pyramids and temples carved with sculptures and inscribed with unknown writings. They are hidden by the trees and trailing vines, and have been submerged by the vegetation for centuries, so that the traveller wonders by what strange catastrophe those who dwelt or reigned in them were driven to forsake them.

Graven Images

Before the present excavation can proceed the ground has to be deforested, and all the trees cut down, all the roots dug up. The throne of the Maya king is 13 feet wide and three feet high; its sloping sides are flanked by carved warriors and snakes, the sacred emblem of the Maya god Kukulcan. It stands in the ancient throne and council chamber, where the cornice is sculptured with snakes and images of the god.

Even more wonderful, though not so picturesque, is the discovery of some graven tablets beneath the prehistoric pyramid near Mexico City, which thousands of years ago was surrounded by a stream of lava and ash, and partly buried. These tablets, like those found in Babylonia's buried cities, are the books of an ancient library. They were graven by scribes of a people who dwelt in Mexico before the Aztecs, before the Taitecs who preceded them, before the Maya Empire; and they are perhaps 7000 years old.

C.N. SPARROWS

The Hole in the Wall

One of the most ingenious choices of a bird home is to be found in the heart of London City, high up in a glazed brick wall of the C.N. office.

Some fifty feet above a busy yard, where paper is unloaded every day to feed the tireless printing-presses, a pair of sparrows have chosen a hole in the wall for their home. There are two small holes on a level about six feet apart, and below them a pipe runs down at an angle along the wall.

Now, the interesting point to notice about this choice of a nest is that the birds have selected the hole nearer to the pipe, so near that by standing tip-toe on the pipe and craning their necks they are just able to look into the nest.

The entrance must be very narrow, for it often happens that when the father bird, returning with food for the family, finds his mate blocking the doorway he has to wait until she in turn flies off in search of food before he can enter and fill once again the gaping beaks of his clamorous youngsters.

The convenience of the pipe as a landing-place seems almost to suggest reasoning power, and apart from this the nest is absolutely safe from marauders, and as dry and cosy as the most nervous mother might desire.

TORONTO PARLIAMENT OF KNOWLEDGE

FACTS AND IDEAS FROM THE SCIENTISTS

Some of the Things Discussed
at the British Association

POLES AND PARASITES

The wise men are home again from Toronto, where the British Association has this year held its meetings.

Once a year it comes together to discuss the scientific inventions and discoveries of the year, and as well as it can it puts them in a form that we can understand, so that all may see how the thought of the world is getting on.

It is not all easy, for often we cannot just dip into the lucky-bag of Science to bring something out; rather is it necessary to bring some thought of our own in exchange. But we have picked out some of the facts and ideas which we have noticed in the reports of the meetings.

IF THE WORLD WENT DRY

Sir Napier Shaw, who used to be Clerk of the Weather, asked what would happen if the Earth went dry; if there were no oceans and lakes from which the Sun could suck up moisture to keep the air damp? Some such conditions already exist over deserts where there are many dust storms and dust whirlwinds. Sir Napier Shaw came to the conclusion that the air would circulate much as it does now, with great currents of air from a hot Equator to the Poles and back again; but that there would be awful dust blizzards going at 200 miles an hour, and a general temperature higher than now over the deserts.

WIND AND HEIGHT

Dr. W. J. Humphries also spoke of weather. He calculated the force of the wind in the cyclones that sweep across America and the Atlantic to Europe. The speed of the wind gets up according to its height above the surface till 500 yards is reached; then it falls till 800 yards is reached, and after this it remains stationary up to one or two miles. Then it drops slightly once more before beginning to get faster and faster as the air gets thinner.

POISONING THE PARASITE

When germs attack the body, said Dr. Dale to the physiologists, the body sets up poisons to counteract those which the germs brought. But some organisms are parasites the body cannot deal with in this way, because it cannot make the antidote strong enough or fast enough. So now the chemists have to find drugs which will poison the parasite without poisoning the patient.

The commonest disease for which this has been done is malaria, where quinine poisons the parasite. Some forms of dysentery are similarly quelled by ipecacuanha; for sleeping sickness and other tropical and world-wide diseases artificial drugs are being built up by the chemists which will destroy the parasite before the patient can be harmed by either chemical or parasite.

THE POLAR CAPS

When the ice from the Pole came far down into Europe in the Ice Age it put an enormous weight on the continents of North America and Europe, which has since been taken off. But according to geologists, weight on one great block of land is always balanced by weight elsewhere. Consequently, said Professor Reginald Daly, when this ice pressure was released parts of the continents must have sunk into the sea, or otherwise changed their height and shape. He thinks that a state of balance has now again been reached.

MAN'S DESCENT

Some more examples of certain fossil apes have been found in America to add to those discovered in Egypt and India, and the idea that this animal was an early man has been again examined. It

QUEER WAYS OF A TORNADO

Buildings Exploded in the
Track of the Storm

WHIRLING TEMPEST THAT
ROSE AND FELL

Some weeks ago a terrific tornado swept through the city of Lorain, in Ohio, and its route was marked by devastation and destruction.

In order to learn something new about the strange ways of these terrible storms, a very careful examination of the area it passed over has been made, and some interesting facts have come to light.

In the first place the tornado, a whirling wind travelling at about eighty miles an hour, assumed a funnel shape as it swept along from east to west. After passing over the city of Sandusky, where it wrecked the waterworks, it descended and crossed Lake Erie at the water level. Then, when it struck Lorain, it began to ascend, and by the time it reached the eastern end of the city it had risen so high as to do no damage. But farther on it descended again, and wrecked many buildings in and around Avon.

The most striking of all the facts brought out by the investigation is that the tornado was funnel-shaped. When, on leaving the lake it struck Lorain, the area of destruction was 6000 feet, or over a mile wide, and this area narrowed down uniformly till, at the eastern side of the city, the devastated area was only 500 feet wide. In other words the tornado was like a huge screw working its way through the city.

The Vacuum Round a House

An examination of the buildings destroyed by the storm shows that, while hundreds were blown from their foundations by the direct thrust of the wind, hundreds of others were blown out from the inside. This was caused by the pressure of the air inside the buildings pushing out the walls and roofs when a vacuum was caused round the house.

An interesting fact noted is that the exploded buildings lay along the centre line of the storm and along its outer edges, which shows that there must have been a vacuum extending through the centre of the whirling mass of air, and one immediately outside this revolving mass.

The wrecked houses in the westerly section of the city were all blown in the same direction, this being due to the great diameter of the storm at this point, but in the east, where the tornado narrowed down, the buildings were hurled in every direction.

Continued from the previous column

was not a man, but its teeth show that man may once have been another branch of the same stem from which the anthropoid apes are descended.

WIND AND WAVES

Dr. Vaughan Cornish, who knows more about waves of the big kind than anyone, studied the ocean waves on a voyage from Southampton to Trinidad and back, measuring the way the wind affected them. The wind ranged from 14 to 24 miles an hour; the waves always travelled more slowly, sometimes by eight miles an hour, sometimes by one mile, though on one very calm day the speed was about the same. When the waves were much slower than the wind their height was always small.

THE INSECT AND THE FOREST

The spruce budworm, the western pine-bark beetle, the spruce-bark beetle, the larch sawfly, the white-pine weevil, have between them cost Canada millions of pounds a year in timber during the last fifteen years. Dr. J. H. Swaine described some methods of fighting them, including the distribution of poisoned dust from aeroplanes. Canada is the chief source of our soft woods.

NEWS FROM EVERYWHERE



Gathered by

A Manitoba man, Alexa Vivier, has just died at 113.

A prison in Stornoway has been sold for five pounds.

The two areas of Matlock Bath and Matlock Urban District are to be made one.

A porpoise weighing about 350 pounds was landed at Brighton and deposited in the Aquarium there.

Kent farmers are complaining of not being able to get labour to gather in the harvest.

Diamond in a Fowl

A diamond of exceptional value has been found in a fowl by a French farmer near St. Etienne.

Aluminium Wheels

Experiments are being made with aluminium wheels for buses in London. Some have already done 30,000 miles of service.

Flying for Everybody

With the help of a Government grant it is hoped to raise £100,000 to establish light aeroplane clubs to bring flying within the reach of all.

The Doll's House

Over a million people have visited the Queen's Doll's House at Wembley, and over £25,000 has been thus raised for charities.

Saving the Pennies

The L.M.S. Railway has pointed out to its workers that if every station and depot used one foolscap sheet less a day £500 a year would be saved.

Birmingham and its Books

In Birmingham Public Libraries nearly three million books were lent last year, the highest number in the history of the libraries.

Women Doctors

An international society of women doctors has been formed at Geneva. There will be an annual conference, the first to take place in London next summer.

From North and South

Half a million people come into London every morning from north of the Thames, and 300,000 from the south of the Thames.

A Doctor's Knowledge

The knowledge of a doctor of 300 years ago compared with today, says a professor, is like the knowledge a savage would have of a motor-car.

The Pity of it All

It is claimed that of the 100,000 cripples in Britain today, 90,000 could have been strong and whole if treated in time.

Welding Diamonds

A means of welding small diamonds together into one big stone is said to have been discovered. The joints cannot be detected with the naked eye.

Your Old C.N.

If a few readers would post their old C.N.s. to Mrs. Hughes, St. John's, Antigua, Leeward Islands, B.W.I., they would be very useful for a school there.

A Big Nosegay

In a recent wild flower competition among schoolgirls at Carlton County School, Bedfordshire, one girl, Doris Smith, aged eleven, gathered 182 different kinds and named them correctly.

Fighting Diphtheria

American surgeons are making use of a wonderful electric suction pump in fighting diphtheria. The pump is used to remove from the throat the accumulations which so often endanger the life of the patient.

America's Zeppelin

A Zeppelin airship being built for America in Germany will have a wireless telegraphy outfit for 1500 miles, with a telephone range of 300 miles. The three hanging aerial wires are each 400 feet long.

£1000 to Stop a Beetle

The death-watch beetle is doing great mischief in the little 13th-century church at Casterton Magna, near Stamford, one of the few churches left with the old high-back pews. The village is asking for £1000 to save the church.

A NEW ENGLISH FOREST

PLANTING FOR THE NEXT GENERATION

Replenishing the World's
Timber Supply

EXHAUSTED NATURAL STORES

A start has been made with the planting of a great new forest in East Anglia. Fourteen thousand acres have already been planted near Thetford, in Norfolk, and the Forestry Commissioners have just bought 6000 more acres. The forest may eventually occupy anything up to eighty or a hundred thousand acres.

Already there are 15 million trees, from seedlings to four-year-old saplings, including pine, fir, poplar, larch, beech, and oak. The pines, sown in nursery beds, stay there for two years; then, after a year in another bed, they are planted out in their permanent positions. It will be forty or fifty years before they are ready for timber.

Only land unfit for agriculture is used for this purpose. The good land in between is let to smallholders who, with their children, become skilled foresters as well. One small holding to every 200 acres of forest is the ideal.

A World Shortage

Similar work is going on all over the country—in beauty spots like Dolgelly, Bettws-y-Coed, and Tintern, among the sand hills near Port Talbot, and on the Yorkshire moors. In fact, afforestation has really at last begun in England.

And it was high time. At a joint meeting of the Botanical and Agricultural sections of the British Association at Toronto a world shortage of timber was forecast. The United States, which consumes half the world's timber production, will have exhausted its virgin forests, at the present rate of consumption, in another thirty years.

It was declared that the world's future timber supply for all purposes could only be secured by the continuous growth of trees in which replacement by planting more than made up for the depletion by cropping. We are glad that we have made a beginning, at any rate.

AUSTRALIA AND ITS DESERT

Will it Blossom as the Rose?

That versatile geographer and explorer, Mr. Stefansson, has been discussing with Australian geographers whether or not Central Australia is properly called a desert.

They are agreed that if a desert is a place like the Sahara, in Northern Africa, where there is nothing but sand, then Central Australia is not a desert. But if, say the Australians, a desert is a place which is "almost useless at present for pastoral and agricultural purposes," then one-sixth or one-fifth of the whole Australian continent is a desert.

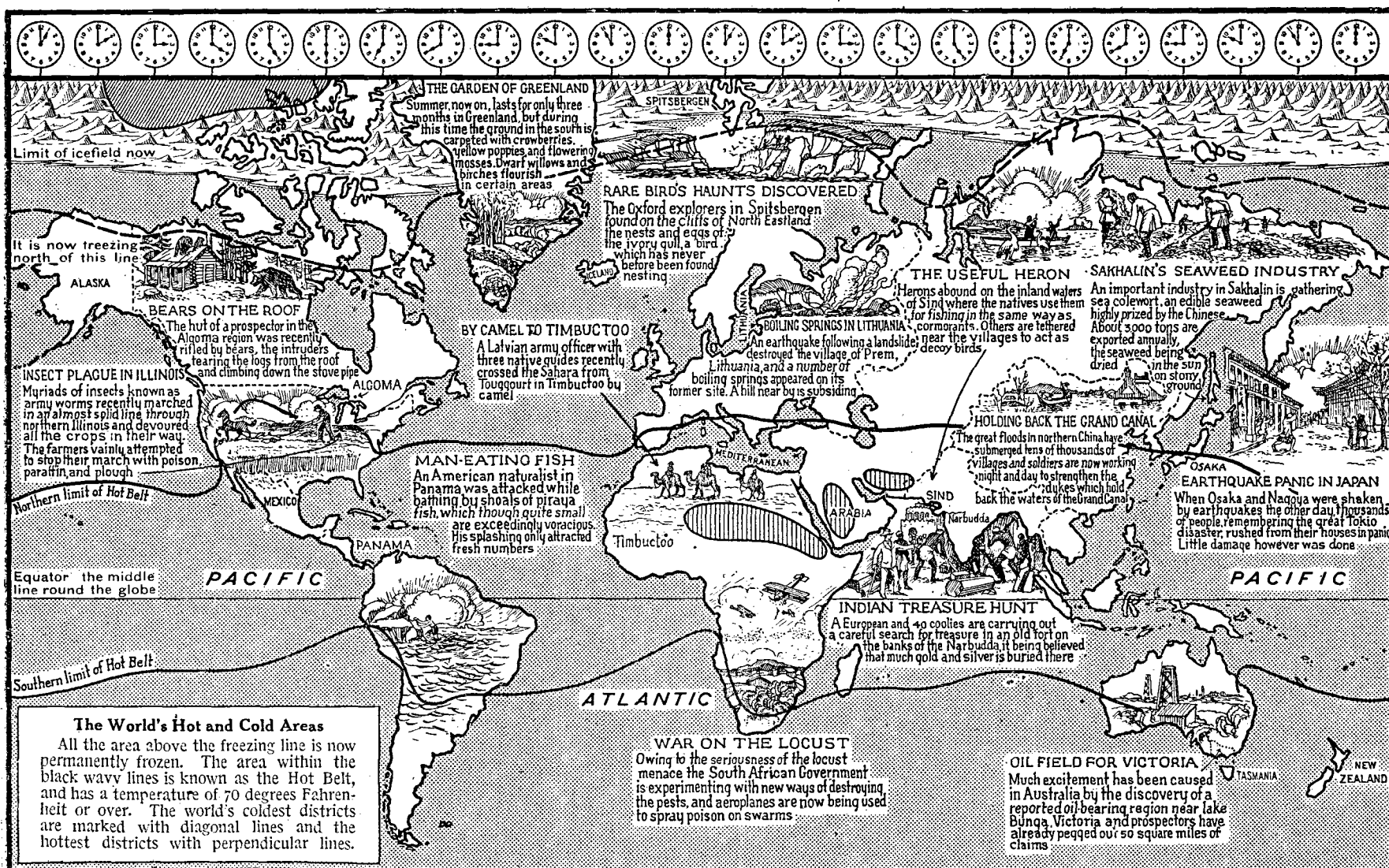
Mr. Stefansson points out that the early American settlers called the prairie a desert, and worthless. Now it is one of the great granaries of the world. In the American desert water was found in creeks and rivers, but in Australia it is below the surface, which means that the Australian "desert" is more hopeful for the development of livestock than of agriculture.

Mr. Stefansson may be right in predicting that the Australian desert will one day blossom as the rose, but that will not be till all its more fertile and more accessible parts have been brought into full cultivation.

Pronunciations in This Paper

Anamabu . . .	Ah-nah-mah-boo
Celestine . . .	Sel-es-ty-n
Ipecacuanha . . .	Ip-e-kak-u-an-ah
Pulsimeter . . .	Pul-sim-e-ter
Pulsometer . . .	Pul-som-e-ter
Schenectady . . .	Ske-nek-tah-de
Siva . . .	Se-vah
Uranus . . .	U-rah-nus
Weregild . . .	Weer-gild

PICTURE-NEWS AND TIME MAP SHOWING THE WORLD'S HOT BELT



IN THE FORBIDDEN LAND Woman Traveller's Visit to Tibet DANGEROUS ADVENTURE IN DISGUISE

There are very few countries which are closed today to the traveller, but the country of Tibet, which lies thousands of feet high on the tableland of the Himalayas, still guards its frontiers from the prying eyes of the West.

Yet a woman traveller has lately penetrated this forbidden land disguised as a beggar pilgrim, and spent two months in Lhasa, the capital, where the Dalai Lama, who is the Pope of all the Buddhists in the world, holds autocratic sway with his monks.

The name of the adventurous lady is Madame Neel. She is sixty, speaks Tibetan like a native, and is so clever at disguises that she was never found out or even suspected, although she visited all the important shrines in the strange and dangerous country.

The measure of her courage will be understood when it is realised that most Tibetans dislike foreigners, and that the people of Lhasa would have little hesitation in killing any unauthorised stranger found within their gates.

IS A LION A WORM? Round-up of the King of Beasts

There is to be a round-up of lions in the Sabie Game Reserve, in the Transvaal. They are believed to number 3000.

The Transvaal Provincial Council has decided that lions are no longer to be regarded as game, but as vermin, which is Latin for worm.

Farmers all along the southern side of the Game Reserve are losing heavily in oxen, horses, and donkeys through the nightly visits of the lions.

The Council has decided to pay £5 a head for lions and lionesses, and it is proposed that 200 unemployed ex-soldiers shall be sent out as soon as possible on a round-up expedition.

THE DESTRUCTION OF GREAT PLACES Is Birmingham to Follow Glasgow?

Glasgow has callously destroyed the famous room in which Lord Lister did the work that led to the saving of millions of lives. Now Birmingham is likely to lose another famous place.

Although earnest efforts have been made to preserve Heathfield Hall, the home of James Watt, as a memorial to the inventor, it may soon be demolished.

The Birmingham City Council has decided that it cannot purchase the Hall, and the estate is now being developed by a building syndicate. The relics from the famous garret, the tools and models of machinery which James Watt left, are to be given a new home in the Kensington Museum.

Thus, if the house cannot be saved, Birmingham will lose its tokens of the genius who, with Murdoch and Boulton, changed the whole nature of industry throughout the world.

A POST OFFICE ECONOMY £50,000 Saved and £5000 Lost

A queer fact has come to light arising out of an interesting economy by the Post Office.

Till 1917 each registered letter was separately checked and signed for each time it changed hands, from the sender to the receiver. Since that date registered letters, once on their way, have only been checked by packets.

This has meant a saving of £50,000 a year in wages, but it has also meant that a slightly larger number of letters have been lost, and the compensation paid for them by the Post Office is about £5000.

So that there is a big net saving in money, though the letters are a little less safe than they used to be. In other words, the Post Office loses £5000 a year by carelessness or theft, and saves the £50,000 which it used to spend to save this.

PRESENCE OF MIND IN THE CLOUDS The Woman Who Knew What to Do

A solitary woman passenger was travelling in the Paris-Constantinople air express when the machine caught fire. If the flames had reached the fuel tank the aeroplane would have been blown to pieces. The passenger, a Frenchwoman, prevented it.

She rammed a hole in the tank and let the petrol out. The pilot stopped his engine and glided 1200 feet down to an island in the Danube, near Budapest.

The machine was burned to ashes, but the mails were saved, and neither pilot nor passenger was injured. The next day they went on in another plane.

LEFT BEHIND The Last Cuckoo?

In August go he must—they say of the cuckoo, which comes in April. But sometimes a cuckoo is left behind from the great trek southward to warmth and food and sunshine, and a correspondent of the C.N. writes to say he saw one at Wicken Fen, in Cambridgeshire, on August 17.

Wicken Fen is a bird and butterfly sanctuary of the National Trust, which is preserving it as a fen such as it was in England at the time of Hereward the Wake; and here, besides the rare plants, come rare birds, such as the Montagu Harriers, which are like small eagles or buzzards, and even the bittern has been reported.

It is not the first time a young cuckoo has been left there. The guardian of the fen says that as August wanes into September the young cuckoo grows tamer and tamer, even perching on the posts which mark the way between the sedge and rushes, and clearly anxious to be fed; but long before the winter comes he disappears, and there can unhappily be little doubt that he dies of cold and hunger.

PLAYING BEETHOVEN IN THE VILLAGES Why a Pianist Left England TODAY IN HANDEL'S COUNTRY

This morning was sent away from England, under escort of a policeman, the eminent Bohemian pianist Mr. Ulman. This action was taken to protect English artists. Does English art need the protection of policemen, and is this in accordance with the conception of art in England?

So wrote Mr. Soermus, the great Russian violinist, the other day. It is a grave and well-warranted rebuke, and we have no answer to give. We are sorry for the thing our country has done.

The theory is that to allow foreign musicians to play here is to take work from our own musicians. The expulsion is made under legislation intended to save British labour from foreign competition.

We saw the other day, in reviewing a book on the history of international intercourse, that the great civilising influence in the past has been the exchange of ideas between the nations, especially in the arts and sciences. It can do nothing but good to English musicians to have great foreign musicians among them, for all art needs the stimulus of other art.

It happens that Mr. Soermus and Mr. Ulman gave their concerts in the village schools of Yorkshire and South Wales. There they played Beethoven and Bach, Handel and Mozart, to the children of the miners; and for doing that Mr. Ulman is expelled and Mr. Soermus is deprived of his accompanist. It is surely wrong, for the country opened its doors to Handel and Mendelssohn, and buried Handel in its national temple.

FAITH

As an advertisement for the climate of that locality, a Florida newspaper has offered to give away its entire issue free on the day following any 24 hours during which the sun does not shine.

CHILDREN'S NEWSPAPER

SEPTEMBER 6 1924

Give us back 400,000 Years

THOUGH last year was the healthiest year ever known, the people of this country have between them lost 400,000 years in time spent on a sick bed!

Most of that time could have been saved. Perhaps in this imperfect world we must all be ill sometimes, but think what a world it would be if, in our little British corner of it, we could save 400,000 years.

It is a great sum. It mounts up from little bits. It comes to less than four days apiece for each of us, but before anyone dismisses such a saving lightly he should remember how priceless an hour can be sometimes.

A wise physician once said to an unhappy patient that no one could tell till his last hour had come what day in all his life had been the most important. There are some hours in our lives which weigh with us more than all the rest. In a day, in an hour, in a minute, a thought may come to a Kepler or a Newton which will change the current of other men's thoughts for ages. In an inspired moment the motive of a heavenly symphony may ring in the ears of a Beethoven; an undying lyric may be born in the brain of a Shakespeare.

Four hundred thousand years! If it were made up of rare moments like those, how rich the world would be!

Even if it were not, if it were to contain merely the everyday of common men, chequered rarely with moments of genius or inspiration, how much richer the world might be! Consider what 400,000 years' comprise. In this period could be contained all the years of the existence of mankind since Pithecanthropus stepped out of his cave to fight a bear. Civilisations have been born in it.

The first civilisation we know of was only 13,000 years ago at most. What is 13,000 years? Babylon and Nineveh, Egypt and Crete, Greece and Rome, have all waxed and waned in less time.

In the world of thought what could not happen in such a span? The years in which Aristotle wrote all his philosophy, or Shakespeare all his plays, were a beggarly thirty. All the calculations of Newton were crowded into less time still. The birth and growth of steam and electricity and wireless and flying are counted, not in centuries, but in years; they would be but a drop in our bucketful of 400,000.

The science of healing itself, Simpson and Lister, all come into only a few years out of 400,000.

Ignorant people, when the calendar was reformed, cried *Give us back our eleven days!* Today we may cry, with much more wisdom, *Give us back our lost 400,000 years.*



THE EDITOR'S TABLE

Fleetway House, Farringdon Street, London
above the hidden waters of the ancient River
Fleet, the cradle of the Journalism of the world



Where It Is Going

SOMEBODY having said that the League of Nations is a going concern, somebody else asks, But where is it going?

The C.N. answer is *To the Millennium*. Keep your eyes on Geneva.

The Leisure that Has Gone

APART from holidays, says the new Bishop of Winchester, he never knows what it is to be able to concentrate his thoughts and reading without interruption.

How many men will sympathise with the good bishop! For ourselves we rarely know a single hour that is not heavily overcrowded. The leisure of life is surely one of its greatest losses since Civilisation came.



Having lost its case before a judge, the War Office is said to persist in its effort to turn Lulworth into a Tank Camp, spoiling it for fishermen and holidaymakers. This is Punch's way of picturing the Minister for War inviting the public to Lulworth.

The Grand Tour

A CAMBRIDGE graduate who once edited the Granta is now washing-up in the pantry of a Piccadilly restaurant. It is very different from the eighteenth-century way of finishing a young man's education by sending him on the Grand Tour.

In 1739 Horace Walpole went straight from Cambridge to the Continent, where he spent two years in post-chaises and sedan chairs. He crossed the Alps in a low arm-chair on poles, dressed in bearskins, and provided with a muff. There, in broad daylight, his favourite travelling companion, a spaniel called Tory, was seized and carried off by a wolf. Farther on he came to a hamlet where he sat down to write home. He called for a pen. There was a long delay, and at last it came in the custody of a sergeant who said it was the only pen in the place, belonged to the governor, and must be returned as soon as the letter was written.

When Walpole got home he had become so used to sights that he declared nothing had seemed more strange and wonderful to him than his first day in Calais. He also said that only in England were there *middling people and middling houses*; "How snug they are!" he cried. Abroad there was nothing between tawdry splendour and squalid poverty.

The Law and a Thrashing

A FATHER, applying in court for permission to thrash his child, told the magistrate he was under the impression that it was against the law for him to thrash his children.

Happily for some children, it is not; but we should like to think it was against the law for children to need thrashing.

Tip-Cat

A WELL-KNOWN Londoner declares he never carries a watch. Perhaps he has taught it to walk on its hands.

A NEWSPAPER asks: Why not take your holidays across the water? Because, anyhow, they'll soon enough be over.

KINEMA photographers have been photographing showers of meteors in the sky. Hoping to find new stars.

AMERICANS say our buses and trams are practically noiseless. Yet they are run on sound principles.

PROVINCIAL visitors like to touch the Prime Minister's door-knocker.

The P.M. lets them—he doesn't care a rap.

A DOCTOR thinks it is healthy to quarrel. Much depends on the size of the other man.

A CONSERVATIVE M.P. says he cannot take the Liberal party seriously. Where does he want to take it?

THE newest tooth-brushes are fitted with a tiny mirror. Useful for people who are always looking down in the mouth.

FAMILY pride is a peculiar thing. But not singular.

MEN prefer to go home from holidays sunburned. At other times they are ashamed to be done brown.

Some Day

MANY an old heart must have been saddened by a poem by Arthur Salmon which appeared in the Observer the other day. It begins:

Some day we meant to travel far,
Before the glow of noontide failed;
But yonder shines the evening star,
And yet—we have not sailed.

Travellers brought back to them wonderful tales; they heard of new worlds of deed, new worlds of thought; they went often to the quayside; other men achieved great things in the wide world while they planned to follow—and yet, they have not sailed.

It is too late for hundreds. But now is the time for boys and girls to determine that this same regret shall not embitter their own old age.

The Lady of the Kiosk

YOU have perhaps noticed our weather. It was an American who said, when asked how he liked our English summer, that it was a pity it rained both days. It was on one of those days that this happened.

A girl who looked at the calendar and temporarily mislaid her common-sense put on a summer gown and went to town. She travelled by train and then by tube. She left the sun in the country, and found the rain when she came out from underground. The call she had to pay was not far from the station, but the rain was one of those slanting downpours which not only come down but leap up from the pavement again to make quite sure of your getting really wet really quickly.

The Touch of Kindness

The girl waited ten, fifteen, twenty minutes, in a crowd of people, for the break in the sky that did not come. She had another train to catch. Five minutes more and then she turned to the little tobacconist's kiosk just inside the station opening, and asked the woman standing inside the time. She was told.

The girl looked worried. "I've not far to go, but it seems madness to venture in this," she remarked.

"Will you be back by one?" the woman asked.

"Yes," the girl said, looking puzzled.

"Then would you mind borrowing my mackintosh?" the woman went on, taking it from a peg as she spoke.

"How very kind of you," the girl exclaimed. "I am so grateful; I'll only be a few minutes."

"Don't thank me," the woman said when the girl returned. "Why, the mac might just as well be keeping someone dry as hanging here."

The Touch of Fussiness

The train went at 11.34. The girl arrived at the barrier at 11.34½ grasping a pound note as a guarantee of honesty. The train stood at the platform and she gave a sigh of relief. "I can go through, can't I?" she said breathlessly.

"What train do you want?" asked the ticket collector.

"To C—," she gasped.

"Goes at 11.34," the man snapped.

"Yes, I know," she said, looking at the train, "but I can catch it."

"Look at the clock." She looked, and looked back at him. "It is 11.35, and it goes at 11.34," he announced.

She looked at him again, and then turned on her heel, walked leisurely to the booking office, bought her ticket for the next train, and returned. The train was slowly leaving the platform, and the man who did his duty without kindness was taking down the board.

Now, I wonder, thought the girl, which would win if the ticket collector married the lady of the kiosk?

A Prayer by Christina Rossetti

O Lord, Who callest Thine own sheep by name, grant that all whom Thou callest by the voice of conscience may straightway do Thy will, or patiently abide to suffer it.



September 6, 1924

The Children's Newspaper

7

THE CLEVER
BRICKLAYER

JOSEPH ASPDIN OF LEEDS

Yorkshire Inventor Very Little
KnownMAN WHO GAVE THE WORLD
A FAMILIAR THING

A great English city is to pay honour to one of its bricklayers. This month a tablet is to be unveiled in Leeds to the memory of Joseph Aspdin.

He was simply a bricklayer, but it is safe to say that no other bricklayer has ever had such an influence on civilisation. We may almost say of him what the epitaph in St. Paul's Cathedral says of Wren: "If you seek his monument, look around."

The World His Debtor

It was this wonderful bricklayer who, in 1824, invented Portland cement, the best cement known in the world, and the American Portland Cement Association is presenting a bronze tablet with the following inscription, to be unveiled in the presence of a number of American representatives:

In memory of Joseph Aspdin, of Leeds, bricklayer, 1779-1855, whose invention of Portland cement, patented October, 1824, and followed by a century of improvements in its manufacture and use, has made the whole world his debtor. This tablet was presented by the American Portland Cement Association, on the occasion of the united celebrations with the British Cement Makers' Federation of the centennial of the invention, October, 1924.

Up to the nineteenth century the cements used in building and engineering were natural products obtained by mixing lime and silica together, but with the development of big engineering enterprises the supply of natural materials fell short, and men began to look around for some way of making cement artificially.

Early Experiments

Joseph Aspdin carried out various experiments at Leeds, in the course of which he took some limestone, ground it up, and after mixing it with clay, heated the mixture in an old-fashioned, bottle-shaped kiln, and finally ground it up. After being mixed with water and dried, it hardened into a very firm substance, closely resembling Portland stone in colour and appearance, and it was this appearance that suggested to Aspdin the idea of calling the product Portland cement.

Such a substance, artificially produced and meeting a growing need, seemed of such importance that Aspdin took out a patent for it, and a year later he started a factory at Wakefield for the manufacture of Portland cement. There was at once a great demand for it, and Brunel used it in the building of the Thames Tunnel. This was the first great demonstration to the world of its enormous value.

A Valuable Material

Wherever chalk and clay are found Portland cement can be made, and as these raw materials are so widely distributed, Aspdin's discovery was of the very greatest importance to the world at large.

Portland cement is one of the most durable substances known. Nothing seems to have any effect on it—heat, cold, or damp—and after it has once set no frost can harm it, though it must be protected from frost during mixing and use. Concrete prepared from it is one of the best fire-resisting substances known. The users of Aspdin's invention are manifold. The peculiar property it possesses of hardening under water renders it invaluable for harbour, dock, and reservoir construction. For forti-

WHAT IS HAPPENING IN THE SUDAN

THERE is a great desire in Egypt to make Britain and the world believe that the people of the Sudan want the English to go away and the Egyptians to become their sole rulers.

To encourage this idea some rioting was organised in preparation for the meeting of Mr. MacDonald and Zaghul Pasha to discuss the future of the Sudan. Some students at Khartum Military College had their pistols taken from them, and at Atbara and Port Sudan some Egyptian railway troops who began injuring property had also to be disarmed.

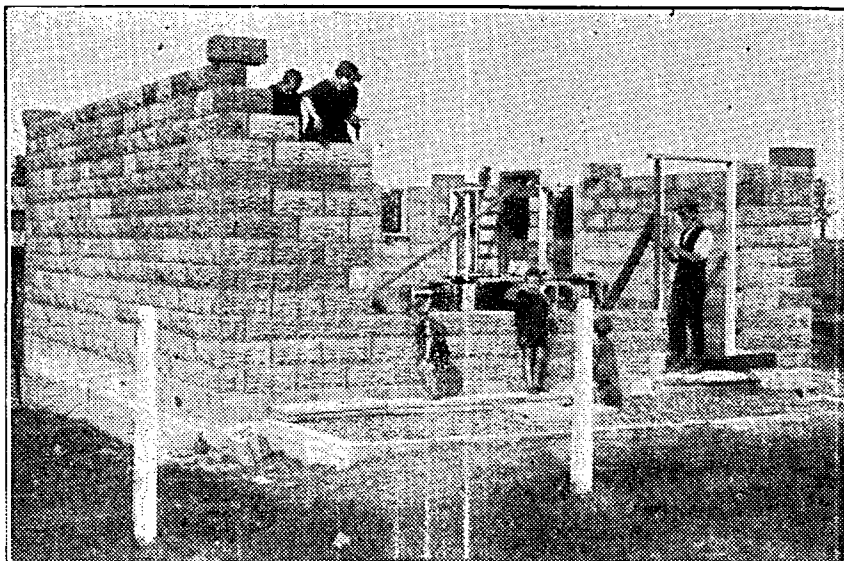
The organised rioting was, happily, a complete failure as a political demonstration, but it aroused some excitement at Cairo owing to a statement by the Egyptian Government that shooting had been done by British troops. The

British Government made an energetic protest against this statement, and against the agitation conducted by Egyptians among the Sudanese. Our Government has announced that it holds itself responsible for order in the Sudan, and has moved troops, warships, and aeroplanes to maintain it.

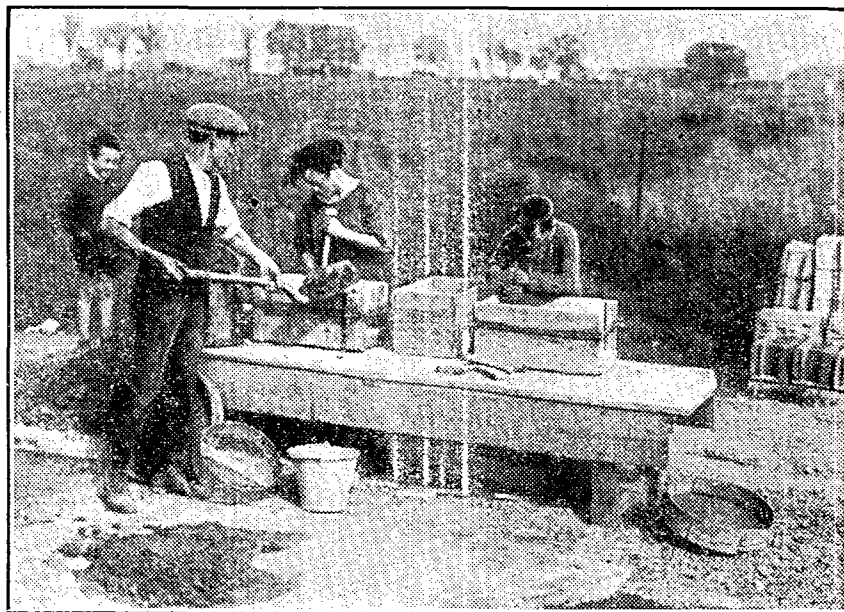
In a country like the Sudan, with its scattered population of six million people of many races and languages, it is impossible to say authoritatively that "the Sudanese" want this or want that. But the men to whom they look as their leaders have said over and over again that they appreciate the benefits of British rule, and wish it to continue.

Among responsible people the view seems to be that the only sensible thing is for the old Anglo-Egyptian co-operation to continue.

BUILDING THEIR OWN HOUSE



Building up the walls of the house



Moulding the concrete blocks

This family, which is unable to find a house, has begun to erect one for itself. Not only are the walls being built, but the concrete blocks are being moulded by the father and mother with the help of their little son.

fications and for all structures in which great strength and durability are required, it is essential.

Of course, the methods of manufacture have been greatly improved and speeded up, as well as cheapened, since Aspdin's time, and this is a good thing, for enormous quantities of Portland cement are used in reinforced concrete construction. The age of wood in building has passed, those of stone and brick are passing, and we are entering on the age of concrete. That ferro-concrete, so greatly used today, is as good and serviceable and cheap as it is we owe to Joseph Aspdin of Leeds, and it is well that his name should be remembered and honoured.

That is why, wherever we may be, in city or town, by viaduct or break-

water, on sea-front or railway station, we may say with real truth of Joseph Aspdin: *If you seek his monument, look around*, for in every big building and engineering project anywhere, Portland cement has its great place.

AMERICA'S INCOMES
Millionaires by the Hundred

The American income-tax statistics for last year are very interesting.

Nearly seventy people paid taxes on incomes of over £200,000, 161 on incomes from £100,000 to £200,000, 309 on incomes from £65,000 to £100,000, and 1323 on incomes from £25,000 to £65,000. Nearly six million people paid income tax on incomes from £200 up.

A GREAT AFRICAN
FAMOUS NATIVE LEADER
IN LONDONHelping the Black Race to
Help Itself

NEGRO DOCTOR OF PHILOSOPHY

One of the interesting autumn visitors to London is the famous African, Dr. Kwegia Aggrey, who is coming for a conference on education in Africa.

"What's the use of being upset or angry," he has been heard to say, "if, when I am on a steamer, some people object to a black man sitting down at the table to eat with them? When this happens I get a table and a waiter all to myself, and enjoy the joke as I see the others crowding together with only one waiter between them."

That is the good-natured way in which Dr. Aggrey deals with the sort of snub he is apt to get because he is black.

- Helping the Africans

Unfortunately, this attitude is still too common in many parts, but we are glad that the British Government has shown no signs of it, for it has appointed Dr. Aggrey as one of the teachers at the big university college now being established at Achimota, on the Gold Coast. This college is to be one of the means of helping the people of Africa to help themselves by giving the black boys a full education, so that they may be equipped for leading their people.

"Not only do my Negro comrades want leaders," Dr. Aggrey told a C.N. representative, "but I want these leaders to have a knowledge of history. When they get impatient with Great Britain for being slow in bringing in reforms for the Negro, I tell them they ought to study history, and not get impatient. It took England from the time of Queen Elizabeth until 1907 to make any but small changes in dealing with the poor in their own country. But, though the Anglo-Saxon may be slow, he does believe in justice."

The Return to the Homeland

The Negro, too, has a great gift to make to the world, Dr. Aggrey believes. "He must meet injustices and oppressions by co-operative love and work. That is one of the things he is going to teach the other races of mankind."

Certainly this is what Dr. Aggrey himself is doing. He was born in West Africa, a member of one of the royal families of the Fanti tribe. After being educated in the great old Cape Coast Castle by the Wesleyan teachers there, he became at 17 an interpreter in the court of King Amonu, at Anamabu, his birthplace. A few years later he went to America, and there, after working his way through college and being a lecturer and professor, he was awarded the degree of Doctor of Philosophy by Columbia University.

It was a great joy to him to be able to return to his homeland a year or two ago as a member of the Phelps Stokes Educational Commission, and such a deep impression did he make that he was appointed on the inquiry into the schools of East Africa early this year.

Preaching in a Cathedral

He has such a sunny personality that usually it does not take the white man long to overcome his prejudice when he meets Dr. Aggrey. A few months ago he was invited to preach from the pulpit of Kampala Cathedral to a company of people who had said that they would never listen to a Negro, while when he visited Stellenbosch, in South Africa, he was the first coloured man to be allowed to speak at a public meeting. A Boer who heard him said he could not go to another of his meetings, or if he did he would have to change his mind about hating all natives!

Although often pressed to become an American citizen during the 25 years he has lived in America, Dr. Aggrey has retained his British citizenship.

THE FLAGS AT GENEVA

Over Fifty Nations Flying Them

THE MISSING ONES

Geneva today is a city of glowing colour. Flying from all the hotels that edge the shore, and reflected in the blue waters of the lake, are the flags of no less than 54 nations.

It is a moving sight to see these colours that have inspired men to heroism and sacrifice, emblems of the countries for which they have lived and died, proclaiming in company faithful allegiance to the League of Nations.

We seek those of our own Empire and, with eyes perhaps a little dimmed by the overflow of thankful hearts, we find them. Here the Union Jack, there the Irish Harp, Maple Leaf and Southern Cross, the Star of India, and the emblems of South Africa and New Zealand, all are there.

Many others we recognise, but for some, less well known, we must turn back to that Spring number of the C.N. which gave us them complete in colour.

Big Countries and Little Countries

We see, too, as we pass along the lakeside, the pride on the faces of other people who joyously spy out their flags, those of little countries next to those of big, new consecrated ones with those that have waved across the centuries.

But there are visitors to Geneva who search in vain for their beloved colours. The Star-spangled Banner is missing, and none are more sorry than those hundreds of Americans who, on their trip to Europe, have called in at Geneva. They have realised something of what the League means, and there is deep regret in their hearts. There is the sorrow of remembering that their President worked heart and soul for this ideal, with entire confidence in the country behind him, not dreaming that its Government would withdraw. It was unwilling to share the responsibility, and so lost its high privilege of serving.

A Proud Emblem

There are Germans too, students at the international summer school which aims at drawing people of all nations closer together, who look vainly for their flag. Happily, in June they could have seen it, taking its place among all the others at the great Labour Conference, but they still wait for their country to apply for full membership of the League.

The Crescent is missing, though Turkey has shown many signs of wishing to join the goodly company, and Soviet Russia still holds aloof.

Theirs is the greater loss, but the League loses too, for it can only come to its full powers when it is truly a League of all the Nations of the World.

Some day it, too, may have an emblem, and it will be the proudest flag that any country can hope to fly.

PENSIONS FOR ALL

An Argentine Experiment

Argentina, which is becoming one of the world's great nations, with an area nine times as big as the British Isles, a population of nine millions, and with one of the world's greatest and richest cities as its capital, has passed a law to create Pensions for Everybody.

The full details have not been arranged, but the law provides in principle for the compulsory formation of provident funds to which both employers and employed are to contribute certain sums by monthly instalments.

The chief object is to provide all workers with pensions after they have done thirty years' work.

OMDURMAN

NATIVE CAPITAL OF THE SUDAN

80,000 People in a City of Mud Bricks and Straw

SQUATTING MERCHANTS OF THE SUK

By Our Khartum Correspondent

The Sudan has been the scene of a disturbing outbreak, leading to fatal firing by troops; but the matter is not supposed to have any great significance.

Our Khartum correspondent sends these notes on life in Omdurman.

Many and vast are the changes which the Sudan has undergone during the last 25 years, but Omdurman itself has not materially altered. The days of Mahdi fanaticism are past, slavery has practically been abolished, but the native has changed little.

A Busy Centre

Omdurman is still a city of mud bricks and straw thatch, and an occasional motor-car, or even the steam tram which runs through the main thoroughfare, has little effect on the mind, so quickly impressed is the traveller by the strange sights which abound on every side.

Representatives of almost every tribe in Africa may be found among its population of 80,000, and, although Arabic is the prevailing language, scores of other tongues are heard. Enormous quantities of goods pass through its markets, brought in from near and far by camel, donkey, and river transport.

One of the sights of the city is the "suk," as the general market-place is called. Here the native comes to do his shopping and his talking. The din is almost deafening. Merchants squatting round advertise their wares, the hoarse voices supplemented by the calls and cries of every description of livestock.

Praise to Allah

Shrill voices haggling over prices add to the clamour. Here a woman breaks through the press bearing aloft a couple of live chickens. Under low straw shelters sit smaller traders selling dates, oil, flour, and any of the other small necessities of native life. Close by is a shelter where crude leather-work is produced, and not far off one may choose a bedstead or a footstool.

Over there may be seen a scantily-clad giant haggling over the price of a length of cloth. He has evidently just arrived from Darfur, and wishes to deck himself in city finery from the proceeds of his morning sales.

As we move farther along the market-place we come across a group of itinerant musicians, chanting long, dolorous praises to Allah to the strumming of a small harp. Down a side street we come upon a more important sphere of industry. Here live the workers in gold and silver, and close at hand the fashioners of ivory and horn. The tap-tap of a small hammer attracts our attention to a gold and silversmith's shop.

The Breeze from the Nile

Stepping from the blinding glare of the Sun, we are for a few moments utterly unable to see, but as our eyes become accustomed to the dimness we can take stock of the interior. On every side is exhibited the work of the quaint old man who peers up from his anvil. Cigarette-boxes in filigree, cake baskets, match-boxes, rings, armlets, ash-trays, and a score of similar articles, are made with wonderful skill by workmen whose tools are very rude and few.

As we emerge from the last shop we are pleasantly aware that the heat of the Sun has considerably diminished and a cooling breeze from across the Nile is springing up. Suddenly a long, wailing cry meets our ears, and, looking up above the shops, we glimpse a white-clad figure on one of the minarets of the new mosque chanting the call to evening prayer.

YOUNG HENRI FABRE

Early Days of the Insect's Homer

HIS FIRST PIECE OF WRITING

Not far from Narbonne, in the south-east of France, is the little town of Sérignan, where a beautiful statue of the great French naturalist, Henri Fabre, has been unveiled.

As one of the speakers said, Fabre opened a new world, which he explored for fifty years without ceasing, and his life-story, full of adventure and difficulties, has all the romantic glamour of an Eastern tale.

When he was 19, and had only just bought his first book on entomology, he made the ascent of Mont Ventoux, in the Alps of Provence. He wrote for a little paper published at Avignon an account of his expedition. This was the first article from his pen, and a student of Fabre's work has brought it to light.

A Poetic Description

In it we find this eloquent expression of the poetic soul of one who was to become world-famous as a man of science, the Insect's Homer.

A herdsman had pointed out to us, as leading to the heights, a painful and narrow pathway which wound here and there amid weather-worn rocks that had crumbled from the arid summit.

For a time we followed this pathway, now skirting the sharp contours of the mountain-side, now plunging into the hollows of the ravines. The sun was scorching. Not a single cloud broke the blue monotony of the heavens. The silence was broken only by the sound of our steps and the echoing of stones as they fell into the rocky solitudes below. The busy bee gathered its booty in the heart of the blue corollas of the lavender. A number of lazy reptiles coiled on a white stone seemed to be drinking in the heat with delight, but, startled by our approach, suddenly vanished from sight.

From time to time a solitary partridge rose on its noisy wings, uttered a piercing cry, and then went off elsewhere to seek the peace we had disturbed.

Twelve years later Henri Fabre published his first book, which revealed many unsuspected habits and instincts of wasps and bees and other insects; and since then his writings have been read all over the world.

A COUNTESS GIVES UP HER HOME

New Use for an Old House

A little way from Dunmow, on the border of Essex and Hertfordshire, stands an old house in a spacious park. All round it are radiant gardens, a Paradise of flowers and sheltered paths, with a sunken pond fringed with broad flagstones, and statues keeping guard over the cool and silent water.

The house is called Easton Lodge, and it belongs to the Countess of Warwick, but she has given it up for the use of members of the Labour Party, to which she belongs. They can come down in charabancs and spend the day in peaceful enjoyment of its beauties, or, if they wish, can stay the week-end in historic rooms where famous men and women of other days enjoyed the hospitality of an ancient family. In order to supervise the comfort of her guests, without making them ill at ease, Lady Warwick lives over her stables.

The housekeeper and the servants like to see the new faces that come and go week by week. Sometimes it is the Home Secretary, Mr. Henderson, who goes down with his wife and his two M.P. sons to play tennis and bathe in the swimming-pool. Sometimes other Labour M.P.s., or simple colliers, weavers, or other working folk, meet quietly and in friendly fashion.

Easton Lodge is not a big house. There are no wonders of architecture or decoration such as are found at Chatsworth and Blenheim. But it is a lovely, ivy-clad, sheltered haven of rest, and weary eyes grow glad at the sight of it.

LINES FROM AN OLD BOOK

Did Milton Write Them? WHY PROFESSOR CANDY THINKS HE DID

In 1921 an old illustrated volume of Ovid's *Metamorphoses*, in Latin and German, printed in Germany, was discovered. Opposite each pictured page was a blank leaf, and on each blank leaf someone had written an English verse about the picture and verse on the adjoining leaf.

In 1922 Professor Candy announced these facts in the *Times Literary Supplement* and declared that the manuscript verses were written by John Milton when he was a boy. Later, he published the verses, with comments in support of his theory of authorship, and now he issues them, with further evidence, in a book of 192 pages. It is called *Some Newly Discovered Stanzas*, written by John Milton: and is published by Nisbet at 7s. 6d. Some of the written verses are lost, but 166 are here reproduced.

Were they written by young John Milton? Did he own this German-printed book and use its blank pages for poetical exercises? An answer is given by Professor Candy with infinite pains, and the answer is Yes, he did.

Weighing the Evidence

First, it is well known that Milton was exceptionally familiar with Ovid's *Metamorphoses*. Next, we have a large number of specimens of Milton's handwriting, some comparatively early and some late. Of course his writing would change a good deal from boyhood onward, but there is a marked similarity between the writing of the verses on the blank leaves and Milton's later manuscripts. This is insisted on in eighteen pages of comments and six pages of comparison of the two scripts.

Further, Milton had many favourite usages in words and in literary style, and Professor Candy points out that some of these are already observable in verses written when he was young, and also in the discovered verses. The circumstantial evidence so carefully collected seems very strong until one reads the verses. It is only then that doubt thrusts itself upon us. The verses are very feeble. Often they are most unmusical, and we question whether John Milton could have written them even in his earliest boyhood. If he did write them they will bring no credit to his memory. We must remember that Milton was still only a boy when he wrote the famous hymn,

Let us with a gladsome mind
Praise the Lord for He is kind.

So that he was by no means a poor poet even then.

NATURAL STEAM

Italy Harnessing It

The emergence of steam from the ground is a phenomenon of volcanic areas in many parts of the world, and now a method of harnessing it to generate electrical power has been discovered. Prince Ginori Conti has been telling of his experiments at Larderello, Tuscany.

For over a century the natural steam there has been used for the boric acid it contains, but in 1904 it was set to drive a small engine. Now three "turbo-alternators" of 2500 kilowatts capacity have been installed. New wells yielding a higher pressure of steam have been harnessed at Serrazzano.

Similar natural steam wells exist in Alaska, California, South America, Japan, and New Zealand, all of which places will doubtless be keenly interested in the Prince's experiments.

BETTER CHILDREN GIVING THEM A CHANCE

The Fine Race Growing Up to
See the Future

BRITAIN'S GREAT HOPE

It is good to learn from the Education Committee of the London County Council that, despite the great troubles left us by the war, the children of London are bigger and healthier than they used to be.

A Central Committee has been investigating the health of the children, and it shows that, as compared with the children of twenty years ago, our eight-year-olds are over three pounds heavier, while they have gained nearly half an inch in height.

This seems to show that poor children are regaining the height and weight of which so many in the past have been robbed by poverty. We may also entertain the good hope that it points also to a longer life for the children of the new generation. Twenty years ago it was shown that a child of ten, born and bred in a poor district of London, had an *expectation of life* eight years less than a child of the same age born and bred in a healthy London district such as Hampstead. This sad difference is now being reduced.

Care of Teeth and Eyes

The Committee shows that children are now not only better fed than they used to be, but better clothed. People are learning how to take better care of themselves and of their children, while in the schools medical and dental treatment is increasing.

The care of the teeth is so important that it is a particular pleasure to read that today 15 per cent more children leave school with sound teeth than was the case ten years ago. This is the work of the school dentists. About 200,000 London children now have their teeth inspected at school, and nearly half are treated so that their teeth are saved instead of becoming a source of trouble, pain, and ill-health.

Sight, also, receives careful attention in the schools, and in 1923 over 21,000 pairs of spectacles were provided.

Towards the Better Days

The effects of sunshine, fresh air, and good food on children are so remarkable that everybody should understand what the truth of the matter is. There is a tremendous truth to learn in this connection. Here it is:

There is a certain physical standard of the race which is a common inheritance. No matter whether born rich or poor, each child inherits this good gift, save in exceptional cases. If, therefore, an average child is properly nourished, and given plenty of sunshine and fresh air from the start, it will develop into a fine man or woman—a worthy representative of the race.

This is the great hope of the nation, and it justifies the increasing efforts of our education authorities. As we have seen, it is not a mere matter of fanciful theory. We are proving in practice that the children of today can, in millions of cases, be given such a chance that they will grow up to be bigger and healthier than their parents.

THE OLYMPIC'S CENTURY

The White Star liner Olympic has just crossed the Atlantic for the hundredth time, and has steamed over 850,000 miles.

A NEW IDEA ABOUT GOING TO WAR

When We Will and
When We Won't

SHOULD IT BE PUT IN WRITING?

One of our wise men, Professor Gilbert Murray, thinks we should put down in writing under what conditions Britain will or will not make war. These are the arguments Professor Murray used at a meeting the other day.

A great danger to peace is the resurgence of conquered nations. Germany must revive, and Russia too. It is necessary that we should know what we are going to do when that time comes.

If we are not ready, anybody can see from the case of Turkey what will happen. Finding that we would not fight, Turkey saw she could take by force what she wanted. A policy of drift was dangerous.

We must have it clearly stated in black and white under what circumstances we will or will not make war, otherwise the danger is that some nation will think that we will not make war, a war will break out, and we shall be dragged in.

The only way to get security is to have it laid down firmly that there are certain things we will not allow. We might accept the general principle that Great Britain will fight to defend the covenant of the League of Nations. I should not mind adding that it will not fight for anything else.

BAKSHEESH

No More Bribery in Turkey?

Turkish customs officials are no longer to take bribes. The Minister of Finance at Angora has told the Director of Indirect Taxation so, and the Director of Indirect Taxation has handed on the announcement to the Director of Customs, who has informed all the customs officers under him of the new rule.

In Turkey bribes are called baksheesh, and hitherto the only way to get goods through the Customs House in reasonable times has been by the payment of baksheesh. Unfortunately, when bribery has once got a hold it takes more than the issuing of new rules to root it out, and baksheesh happens to be as old as the Turkish Empire itself—and older. We shall see what happens.

A NEW METAL

Holding Oil Like a Blotting Pad

An American motor manufacturer has invented a new metal for use in places where there is excessive friction.

It is a copper-tin bronze in which graphite has been incorporated, and the remarkable thing about it is that it will absorb oil like blotting paper. Thousands of small pores honeycomb the metal, and these absorb lubricant up to as much as 25 per cent of the total mass of the piece.

The oil does not drain out, but works to the surface gradually, and this obviously gives ideal lubrication. The metal is said to be hard enough for the roughest bearing wear.

AN IDEA OF WIRELESS POWER

The Fly on the Wall

Some real idea of the small amount of power actually received by a wireless set is given by Dr. Whitney, of the American General Electric Company.

He has calculated that a loop aerial a foot across, receiving at Schenectady from the powerful transmitting station at San Francisco, receives such a minute amount of power that a house-fly in climbing one inch up a wall would expend as much energy as the aerial would receive working day and night continuously for 35 years.

C.N. QUESTION BOX

All questions must be asked on postcards: one question on each card, with name and address. The Editor regrets that it is not possible to answer all the questions sent in.

What was Werregild?

An Anglo-Saxon term used for the fine paid to the relatives of the deceased by a person who had murdered another.

Of Whom Was it Said "Here Lies One Whose Name was Writ in Water!"?

This is the epitaph on the tomb of John Keats, the poet, chosen by himself.

Does the Word Cab Occur in the Bible?

Yes; but it does not mean a vehicle but a measure. It is found in the second book of Kings, chapter 6, verse 25.

What is a Jack o' Lent?

A straw figure which used to be carried about at the beginning of Lent. It was said to represent Judas Iscariot.

Which are the Three Estates of the Realm?

The lords spiritual, the lords temporal, and the commons. Sometimes they are spoken of as the king, lords, and commons, but this is not in accordance with old usage.

Who was Celestine?

Celestine was the name of five Popes, the most noted of whom was Celestine the Fifth, who founded the Celestines, an order of reformed Benedictine monks. He died in 1296.

What is Pakoe Kidang?

This is the name given to the silky hairs obtained from a Javanese tree fern known to scientists as *Dicksonia chrysotricha*. It was formerly used in Holland for stuffing pillows.

Who Invented Cold Storage?

Francis Bacon was its originator. While travelling one winter's day he stopped his coach, bought a chicken, and stuffed it with snow to preserve it. But in doing so he caught a cold from which he died.

What is the Book of the Dead?

A collection of ancient Egyptian writings of various periods dealing with the life after death and containing instructions in the way of charms and magic formulae for the dead to use in travelling safely through the world beyond.

How is Rhubarb Grown from Seed?

The seed should be sown in spring, the plants being shifted the following spring. Sticks, however, cannot be pulled under three years. It is better to buy roots and plant on good soil in spring. They will then yield in the following year.

What is the Difference Between a Pulsimeter and a Pulsometer?

A pulsimeter is an instrument for measuring the rate or force of the pulse, and a pulsometer is a steam-condensing vacuum pump, so called on account of the pulsatory action of the steam.

What is the Origin of the Saying "To Come a Cropper"?

This has developed from the expression "to come to the ground neck and crop," meaning a fall in which the neck and the crop, that is the gorge or pouch-like gullet of a bird, are laid level with the ground.

Who is Siva?

Siva, or Shiva, a name meaning kindly or gracious, is the third of the great Hindu trinity of gods, and is regarded as a deliverer and restorer though he has also his terrible side. The bull Nandi is his sacred animal, and the god is usually shown girdled with serpents.

How Did the Phrase "The Thin Red Line" Originate?

This phrase was used by Dr. W. H. Russell, the war correspondent, to describe the 93rd Highlanders at the battle of Balaclava, because they did not take the trouble to form into square. It forms the title of their regimental magazine.

What is the Origin of the Salute of Guns Fired for the King?

It is said to have originated in the idea that the peaceable visit of a king rendered it unnecessary for guns to be kept charged, and so they were fired off as an evidence of good faith and trust. The idea developed, and the number of guns fired varied according to the importance of the person saluted.

What Does the Grasshopper on the Royal Exchange Mean?

The Royal Exchange was founded by Sir Thomas Gresham, and a grasshopper was his family crest. Formerly the Old Royal Exchange had a number of grasshoppers decorating it in different parts. No doubt this creature was selected for a crest as a pun on the name Gresham, gres or groes being Anglo-Saxon for grass. The story of Gresham being rescued from death by the chirping of a grasshopper is a legend.

THE MYSTERIOUS WORLD

URANUS AT HIS NEAREST

Only 1,773,500,000 Miles Away

HOW TO SEE THE DISTANT PLANET

By Our Astronomical Correspondent

The remote and mysterious world Uranus will be at his nearest to us next Friday, September 12, being then 1,773,500,000 miles away.

Not that the fact of his being at his nearest makes much difference to his brightness, but because he is now in what astronomers call opposition; that is, in that part of the heavens directly opposite to the Sun, and is therefore most favourably placed for observation, being at his highest point above the horizon at midnight, Greenwich time.

Uranus has been gradually getting more favourably placed for observation in our northern latitudes, and has now entered the constellation of Pisces.

Mars and the star Delta in Aquarius are the nearest bright luminaries, and with their aid and field-glasses, or a small hand telescope, Uranus may be located. Our star map shows



Where to find Uranus

their relative positions, together with all the faint stars just within reach of naked eye vision, on a very dark and clear night.

Uranus will be one of these in the position indicated, but it must be remembered that the star map is on a very small scale, covering an area of the sky as large as that of the famous seven stars of the Plough.

The only way to identify Uranus is to make a sketch of all the stars near his locality, carefully noting, by means of imaginary triangles from star to star, the relative position of each stellar point; then, a few weeks later, compare the sketch with the stars and so discern which has moved.

Uranus will in a month pass over a space equal to about twice the apparent width of the Moon as it is now, travelling in a westerly-retrograde direction; so some considerable length of time must elapse before his motion becomes obvious.

Next week the brightness of the Moon will make observation impracticable; but Uranus will be available for observation during the autumn evenings until December, by which time Mars will appear very close to that weird far-off world.

In a dim and chilly remoteness, 1782 million miles from the Sun, Uranus rolls along at an average speed of 260 miles a minute—much slower than our Earth's 1100 miles a minute. Nevertheless, he spins much faster, spectroscopic researches indicating about 10 hours 45 minutes as the period of the rotation of this great globe 65 times the size of ours.

As we receive about 360 times the sunlight that Uranus does, day must be a very dull affair in his cloud-covered world. Moreover, summer warmth certainly cannot be looked for from the sky on Uranus, with the Sun 360 times less powerful than we know him.

There are, however, many reasons for regarding Uranus as a world of great internal heat, and we know that even on our old Earth, much farther advanced in planetary evolution, we have to go down but a mile or two to find conditions much warmer than on the surface. What if they are close to the surface on Uranus? No wonder he has enormous cloud belts.

G. F. M.
Other Worlds. In the morning Venus is in the east. In the evening Jupiter is in the south-west till about 10 p.m. Mars is in the south-east.

THE MUD PUPS

An Exciting Story of
a School by the Sea

Told by T. C. Bridges
the C. N. Storyteller

What Has Happened Before

Russell Arnold, a schoolmaster, inherits Salthorpe school from a relative. When he arrives at the station with his sister Bess, the cab-driver takes them by a short cut across the sand at the mouth of the creek, but a sudden fog causes them to be caught by the rising tide. They are rescued by a boy named Jack Seagrave, who works for Mr. Soper, the farmer of the land adjoining Salthorpe.

Russell finds that there is no money to run the school, and is advised by Mr. Jarvis, the assistant master, to sell the school's two hundred acres of pasture land to Farmer Soper.

While Russell is discussing terms with Soper, he sees a bully attacking Jack Seagrave.

CHAPTER 4

Alfred's First Lesson

Russell did not wait to go round by the door. In a flash he had flung up the sash and leaped out.

He heard Soper shout something, but did not catch the words. He was across the yard in half-a-dozen strides, and catching the big lout by one ear, jerked him away from his victim.

"Ow!" shrieked the lout. "Leggo! Leggo o' my ear! You're hurting me!"

"Which is exactly what I meant to do," replied Russell. His voice was soft as silk, but his grey eyes were alight with indignation.

"How do you like it?" he added, giving the bully's ear another tweak.

The lout shrieked, and writhing round kicked viciously at Russell's shins. It was a foolish move on his part. Russell, who had played Rugby for his university, eluded the kick without the slightest difficulty, then suddenly shifted his hold to the other's arm, and with a quick twist held him so that he stood bent over backwards and quite helpless.

"I suppose you are under the impression that you can inflict as much pain as you please without suffering any in return," he continued. "I must teach you better. Bess, fetch my stick from the hall."

Bess fled to do her brother's bidding, but even as she turned, Soper himself arrived on the scene.

"What do you mean by treating my son like that?" he blustered. "You let him go, or it'll be the worse for you."

Russell, still holding the lout, gazed at the farmer calmly.

"So he is your son, is he? And may I inquire what he means by bullying this lad in so disgraceful a fashion, and what you mean by allowing him to do so?"

Two crimson spots showed on Soper's thick cheeks, and his small eyes had an ugly shine.

"I don't want none of your interference. You let Alfred go, or I'll put you through it."

Russell shook his head.

"If I may offer you some good advice," he remarked, "it would be that you go back into the house and remain there until I have given this young bully the punishment that he deserves."

"You're not a-going to touch him!" roared Soper, clenching his fists, each of which was about the size of a small ham. "Let go of him this minute!"

At this moment Bess arrived with her brother's stick, a light walking cane. Soper turned and snatched it from her with such force that he nearly knocked her down. Then he struck at Russell with it.

Like a flash Russell switched round, and the cane, instead of striking him, cut young Soper hard across the legs. The youth howled lustily, and Soper, with a furious exclamation, dropped the cane and sprang at Russell, striking out at his head with his big fist.

But when the fist arrived Russell's head was no longer there, and the next thing that Soper knew he was flat on his back on the muddy ground. Russell had not hit him, but merely tripped him.

Quick as light, Russell had picked up the stick, and catching the younger Soper by the collar gave him three sharp cuts.

"Now clear out!" he ordered curtly. "And next time you think of bullying a boy smaller than yourself remember that there is more where this came from."

Tears were running down young Soper's fat cheeks as he retreated, howling, towards the house. Russell turned to the elder man, and offered his hand.

"You'd better get up," he said. "You are not hurt."

Soper scrambled to his feet. He was not hurt, but he was purple with a mixture of rage and fear.

"I'll have the law on you for this!" he growled out hoarsely. "You'll be sorry for this the longest day you live."

Russell shrugged his shoulders.

"I am always sorry to quarrel with a neighbour," he said, "but when you are calmer you will realise that you brought this on yourself. Now I will say good evening. Come, Bess!"

CHAPTER 5

A Few Words with Jarvis

Bess gazed at her brother.

"You aren't going to leave Jack here!" she exclaimed. "That horrid Alfred will beat him again as soon as we are gone."

Russell gazed at his sister, then at Jack Seagrave. A puzzled frown crossed his face.

"What can we do?" he asked of Bess.

"Why, take him with us, of course," replied Bess without the slightest hesitation.

"But we have no right to," he answered.

"That's nonsense," said Bess confidently. "He doesn't belong to the Sopers. They picked him up on the beach when he was a baby, and he's been a sort of slave to them ever since."

"Is this true, Jack?" asked Russell.

"Yes, sir," Jack answered quietly. "Quite true."

"Then the Sopers have no right to keep you?"

"I think I have done enough to pay for my keep," said Jack rather grimly.

"But if I take you away what can I do with you?"

"I shouldn't stay after this in any case," said Jack. "I'd rather tramp the roads," he added.

"I am not a rich man," Russell told him. "If you come with me you will have to work."

"I'm not afraid of work, sir," said Jack simply.

Russell took one look at the small pinched face, the firm lips, and resolute eyes.

"We'll try you anyhow, Jack," he said kindly, and Bess gave a little cry of delight.

"Oh, I'm so glad!" she exclaimed, and danced away.

The Sopers made no attempt to interfere. They stood scowling but silent while the three walked away from the farm, and took the short cut back to the school.

Bess and Jack talked hard, but Russell said nothing. He was feeling far from happy, for he had not only failed to sell his land, but had also quarrelled with the only man who seemed likely to buy it.

"And yet I don't know what else I could have done," he said to himself. "I certainly could not let that lout bully Jack. And anyhow, I don't like those Sopers, and perhaps it is just as well that I shall not have any more to do with them."

Reaching the school, he was met in the hall by Mr. Jarvis, who led the way at once into the dingy study, and closed the door.

"Well?" he said eagerly, "did you get the business through with Soper?"

Russell shook his head.

"Very much to the contrary, I am afraid, Mr. Jarvis. So far from selling the land to Mr. Soper, I have quarrelled with him hopelessly."

A look of dismay showed in the other's deep-set eyes.

"What do you mean?" he demanded.

Russell did not quite like the tone in which Jarvis spoke, but he explained clearly just what had happened.

Jarvis frowned heavily.

"But this will never do," he exclaimed. "Whatever induced you to interfere in such a way?"

Russell drew himself up.

"I interfered because it was the only thing to do, and in the circumstances I should always act in the same way," he answered curtly.

Jarvis saw he had gone too far.

"Yes, I see that you could not help it," he said hastily, "but if you will leave the matter to me I think I can smooth things out, and even, if you wish it, arrange the sale."

He spoke so civilly that Russell calmed down.

"That is very kind of you, Mr. Jarvis," he answered, "but the price offered by Mr. Soper is absurdly low. I will look round for another purchaser."

"I am afraid you will have difficulty in finding one," said Jarvis regretfully. "To reach those fields it is necessary to cross Soper's land or to come through the school playground. That makes it awkward for any purchaser from a distance."

"That is what Soper told me. Indeed, he held it over me as a threat. I do not like Soper, Mr. Jarvis, and I shall not go farther with him till I am quite certain that I cannot sell to anyone else."

Jarvis shrugged his shoulders.

"Just as you please, Mr. Arnold, but please remember that if the school is to be carried on, we must have money."

"I know that," replied Russell quietly. "And now if you are ready, we will go through the accounts."

CHAPTER 6

Jack Gives Advice

THE accounts were not cheerful reading, and when Russell went out of the study he felt anything but happy. Bess met him outside, and at once saw that he was upset. She slipped her hand into his.

Pages of Fun in Picture and Story

Do you know the jolly coloured picture paper BUBBLES? If you don't, you've missed a big treat! It "bubbles" over with light-hearted fun and jollity. Every week there are stories, pictures, tricks, and jokes in plenty. Buy a copy TODAY. It's the really happy paper for all Boys and Girls

BUBBLES

2d. EVERY WEDNESDAY

"What's bothering you, Russ? Is it that horrid Soper?"

"No, dear. I have just been going through the school accounts with Mr. Jarvis, and I see plainly that I shall never be able to carry on here without ready money. Mr. Jarvis says that he can arrange the sale of the land to that unpleasant farmer person, and it looks to me as though I should be forced to let it go."

"No!" said Bess. "No! You must not dream of selling it, for it will be much better to keep it."

Russell stared at his small sister with perplexed eyes.

"Keep it, Bess dear? What do you mean?"

"I will tell you," said Bess eagerly. "I have been talking to Jack. He says that it is the richest grazing land for miles and that it would pay you splendidly to work it yourself."

Russell frowned a little. "But I am no farmer, Bess."

"Jack is," said Bess confidently. "He knows all about it. He says that you could keep cows and sheep, and that the boys could help you to look after them."

"What—turn them into mud pups, as we used to call the farm pupils up at home in Worcestershire," laughed her brother.

But Bess remained perfectly serious.

"I don't see why not, Russell. It would be very good for them, and I'm sure they would love it."

Russell stopped laughing and gazed at Bess.

"It's not such a bad idea after all. Indeed, I believe that it is worth thinking about. Bess, send Jack to me, and I will talk it over with him. The boy has a head on his shoulders, and we may have done a good turn to ourselves as well as to him in taking him away from those Sopers."

Bess skipped off in the highest spirits. She found Jack watching the boys of the school, who were playing cricket on a very poor pitch, and sent him to her brother. Russell had found a seat on a garden bench.

"Sit down, Jack," he said. "I want to hear all about this plan of yours."

Jack's thin cheeks flushed.

"I hope you won't think it cheek of me, sir," he said, "but I know that Soper has made a good thing out of your land. He's been renting it for years past, and supplying the school with all their milk and butter and vegetables and eggs. I thought if you kept the land you could do the same and save a lot."

"It sounds most promising, Jack," agreed the master, "but I should have to buy cows and other farm stock, and frankly I have not the money."

"But couldn't you borrow it, sir?" suggested Jack timidly. "I know that Soper borrowed some money on a mortgage, I think it was called."

Russell started slightly. "For a youngster of your age, you certainly have ideas," he said. "I will try to do so. I will go back to town at once and see what can be done." He paused. "You will stay here, Jack, till I return," he said. "I will tell Mr. Jarvis to look after you."

The colour faded from Jack's face; he seemed about to speak, but checked himself. "Thank you, sir," he said, and Russell, getting up, called Bess and told her what he had decided.

Jack went with them to the creek and rowed them across. Then he returned to the school.

As he came up the drive he was met by Mr. Jarvis, who stood and glared at the boy with a look so malignant that Jack shivered slightly.

"So it is you that I have to thank for this business," said Jarvis in a grating voice. "You, you beggar's brat! Your new friend will not be back for at least two days. That leaves me time to discipline you, and believe me, I mean to do it."

TO BE CONTINUED

Who Was He?

The Dunce

A POOR boy who was destined to become the founder of a great empire showed signs even in his childhood of the strong will and fiery passion that were to mark him in after life. His daring, too, was very marked, and one day he climbed to the top of the lofty steeple of the parish church. The people gathered on the ground below and watched him sitting on a stone spout near the summit.

Another exploit was the gathering together of all the idle lads of the village and their formation into a kind of robber army which exacted tribute of apples and other desired plunder from the shopkeepers.

He was sent from school to school, but made little progress in learning though in mischief and adventure he was a past master.

While quite a youth he was sent out to Madras where, in wretched lodgings, with poor pay, and a haughty disposition, he had a miserable experience. He had few friends and the climate affected his health. Yet it was in this land that he was to do a great work of lasting value.

At first, however, he longed to return home and wrote to his friends: "I have not enjoyed one happy day since I left my native country." There was one solace, however. The Governor of Madras possessed an excellent library and the young man had access to this. He became for a time a great reader and it was then that he acquired most of the book learning he ever had. As a boy he was too idle to read much and as a man he became too busy.

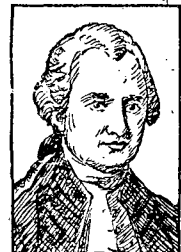
So miserable did he find the drudgery that he attempted to take his own life, but twice the pistol snapped without going off. Thereupon he exclaimed: "It appears I am destined for something; I will live."

Soon after this Madras was captured by an enemy and the young man had to flee, but he showed much resource and bravery, and soon became an intrepid leader, winning striking victories.

He married and came back to England, but two years later returned to India and won further great victories. Then once more he came home, with much wealth acquired in ways that were not altogether worthy, entered Parliament, and was later on made a peer.

Indian affairs, however, had fallen into a confused state and he was once again sent out, doing splendid work in reforming the civil service and re-establishing military discipline. In

doing this he made many enemies and when he returned to England he was attacked with great animosity, as a result of which he died by his own hand. Here is his portrait. Who was he?





Glad Now Are All Things Far and Wide



D! MERRYMAN

SOME visitors calling at the White House when Abraham Lincoln was President, told him of a body of water in Nebraska bearing an Indian name which they could not recall but which signified Weeping Water.

"Well," said Lincoln, "as Laughing Water, according to Longfellow, is Minnehaha, this must be Minneboohoo."

Alphabet and Arithmetic



When the letters of the words represented by these pictures have been added and subtracted the remaining letters will spell the name of an animal. *Solution next week*

WHAT is always behind time?
The works of a clock.

A Puzzle in Rhyme

SERENELY fair and softly bright,
My first illumines the dewy night;
My second is a homely thing
Which much contentment oft doth bring
When you and I and other men
Use knife and fork, or else a pen.
Now, view my whole with seamen's
Sight,
And, lo! I'm turning to the right.

Answer next week

Result of the Painting Contest

THE first prize of £1 in the painting contest described in the C.N. for August 2 has been awarded to Kathleen Horsman, 38, Chestnut Avenue, Crouch End; and the five prizes of 2s. 6d. each to Q. Dawe, Kendal; Isabel Fowler, Liverpool; Holda Fowler, Liverpool; Ursula Payne, Hayes, Kent; Nancy Tate, Plymouth.

Here is another painting contest open to all readers. The Editor will give a first prize of £1, and five other prizes of 2s. 6d. each to the readers who paint this weather picture for September best.

The picture must be pasted on a postcard, and should be addressed to C.N. Painting, Gough House, Gough Square, London, E.C.4, and be posted to arrive by September 15. Under the picture write: "In this contest I agree to accept the Editor's decision as final," and sign your name and address.

Too Much Obedience

FREDDIE's father always expected instant and unquestioning obedience from his children. One day there was a sudden downpour of rain, so he told Freddie to go upstairs and close the trapdoor in the roof.

"But, Father—" began Freddie, remaining in his chair.

"Fred, close that trapdoor at once!"

"Yes, Father, but I—" "Frederick!"

Without another word Freddie went upstairs and closed the trapdoor.

An hour later, when the family sat down to tea, Freddie's brother did not appear, and his father asked what had happened to him.

"Well," said Freddie, "he was out on the roof when you told me to shut the trapdoor, and it has been raining ever since."

Question and Answer

CAN you tell me why
A hypocrite's eye
Can better descry
Than you or than I
On how many toes
A pussycat goes?

A man of deceit
Can best counterfeit,
And so, I suppose,
He can best count her toes.

Is Your Name Bray?

THE surname Bray may have one of two origins. It may have originated as a nickname from an old Cornish word meaning fine, brave, or it may have been given to the ancestor of those bearing it because he lived in one of the places called Bray in England, Ireland, or France.

WHY is a crocodile a most deceitful creature?

Because it shows an open countenance in the act of taking you in.

Mud and Water

SOME Boy Scouts were about to build a temporary bridge over a stream, so one of the boys used an eighteen-foot stick to find the depth of water and mud.

"How deep is the mud?" asked one of the Scouts.

"Well," replied the other, when he had made his measurements, "the stick is twice as deep in water as it is in mud, and twice as much above both as in water and mud together."

How deep was the mud?

Solution next week

ANSWERS TO LAST WEEK'S PUZZLES

Word Changing

Churl, lurch, curl, cur

What Is It? The letter E

A Hidden Word Puzzle
Locomotion. LOaf, COal, MOtor,
Tie, ONion

Adolphus Gets the Worst of It

JACKO got very tired of hearing people say how well Adolphus played the 'cello. He thought it was about time he had some praise himself.

"Can I have some piano lessons?" he asked his father one morning at breakfast.

Mr. Jacko scowled at him over his paper; he was never at his best early in the morning.

"Piano lessons, indeed!" he snorted. "I wonder you like to ask such a thing!"

Mrs. Jacko tried to clear the air.

"Don't be hard on the boy," she said. "I'm sure it would be very nice if he were able to give us a tune sometimes, like Adolphus."

But Mr. Jacko wasn't going to be persuaded into anything that morning.

"He'd better learn something at school before he asks for piano lessons!" he growled. "Why, the boy can't even add two and two together!"

But Jacko wasn't as ignorant as all that; he got out his money-box after breakfast and spent quite a long time adding two and two together. And after that he ran out to the music-shop in the High Street.

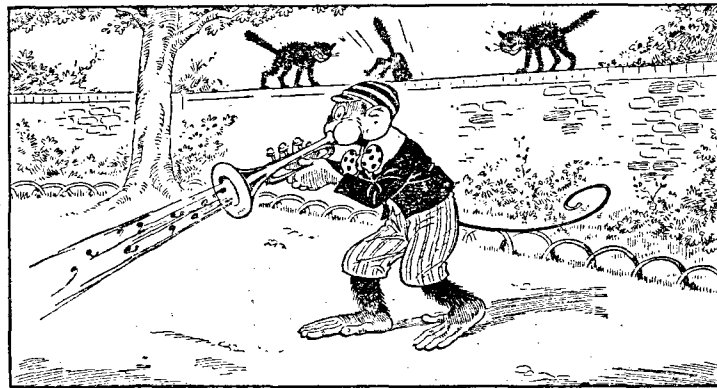
"I want a trumpet," he said, not too politely.

The man in the shop seemed a bit bewildered. He said he supposed Jacko meant a cornet, and he brought out a lovely-looking instrument that was just like a trumpet, only you could play a tune on it by pressing various stops.

Jacko was delighted.

"The very thing!" he shouted. "I'll have it!"

And he was so impatient to have the cornet that he ran off



Jacko began to practise right away

with it under his arm without waiting for the man to wrap it up for him.

He began to practise right away, and got so keen on it that he didn't even want to stop for meals. He was quite tired by bedtime—and so were his family and the neighbours!

By the end of the week Jacko could play quite a lot of tunes; he was so proud of himself that one evening after supper he offered to give a concert.

Nobody wanted to listen to him, but Mrs. Jacko said it was a shame to hurt his feelings, and in the end they all sat down and "prepared for the worst," as Adolphus called it.

Jacko thoroughly enjoyed himself. He made a lot of bows and flourishes like Adolphus did when he played in public. And he took so long over it that it gave Adolphus a chance to get hold of the cornet and pour the water out of a vase into it.

Jacko never noticed anything. He took up the instrument at last and gave a big blow into it.

There was a horrible groan, and a stream of water shot across the room—right into the face of Adolphus. He had never been so sold in his life!

Tales Before Bedtime

The New Hat

WHEN Mother said at breakfast-time: "I really must get Millicent a new hat," Millicent jumped up excitedly, and cried: "Oh, do let it be a daisy hat, Mummy."

"Why, what is a daisy hat?" asked Mother smiling.

"She means a hat trimmed with daisies," explained her big sister Elsie. "Ever since I taught her how to make daisy chains she has been mad over daisies."

"Well," said Mother, "a wreath of daisies will make a very pretty trimming for a little girl's hat. We will go along to Miss Brown's and see what we can find."

Miss Brown kept the milliner's shop in the High Street, and there Millicent went with her mother that very morning.

There were hats of every shape and colour in Miss Brown's shop, and when Mother explained what they wanted, Miss Brown said: "I've got the very thing!"

And she opened a drawer and took out a dainty little straw hat with a wreath of daisies all round the crown.

It fitted Millicent as if it had been made for her. Millicent was delighted. "Do let me wear it," she begged.

So the old hat was sent home in the box, and Millicent went proudly out of the shop with the new one on her head.

Mother had a lot of shopping to do that morning, and for once Millicent went from shop to shop very willingly. She wasn't vain, but she did love her pretty new hat.

At last all the shopping was done, and they turned back



She turned round sharply

home. At the corner of the High Street they had to wait a minute for the traffic.

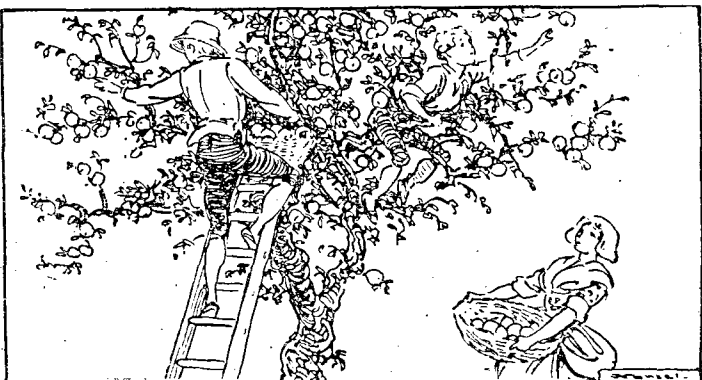
Suddenly Millicent started; something was pulling at her head.

She turned round sharply, and found it was an old cart-horse. *He was nibbling the daisies in her hat!*

Millicent was terribly upset; but Mother only laughed, and said: "We must go back to Miss Brown and get her to put some fresh ones in."

And so they did; but the poor horse must have been terribly disappointed when he found the daisies were only cotton ones!

Wise Old Weather Saws—September



September blow soft
Till the fruit's in the loft

Those Who Come and Those Who Go

How many people are born in your town, and how many die? Here are the figures for five weeks in 12 towns.

TOWN	BIRTHS		DEATHS	
	1924	1923	1924	1923
London	8687	9092	3700	4203
Glasgow	2455	2560	1194	1200
Liverpool	2020	2006	817	852
Birmingham	1909	1824	728	779
Edinburgh	986	871	472	447
Hull	655	651	283	263
Norwich	209	243	123	125
Wigan	159	178	57	85
Carlisle	125	109	48	56
Bournemouth	108	123	80	85
Aberdare	105	138	47	56
Swindon	102	65	31	43

The five weeks are up to Aug. 2, 1924

The five weeks are up to Aug. 2, 1924

Ici on Parle Français



Le fourgon Un ogre Une armoire

Voici le fourgon du boulanger
L'ogre effrayera les petits enfants
Cette belle armoire a deux portes



Le cerceau La couronne Le vagabond

Le chien saute au travers du cerceau
La couronne est destinée au héros
Le vagabond erre sur les routes

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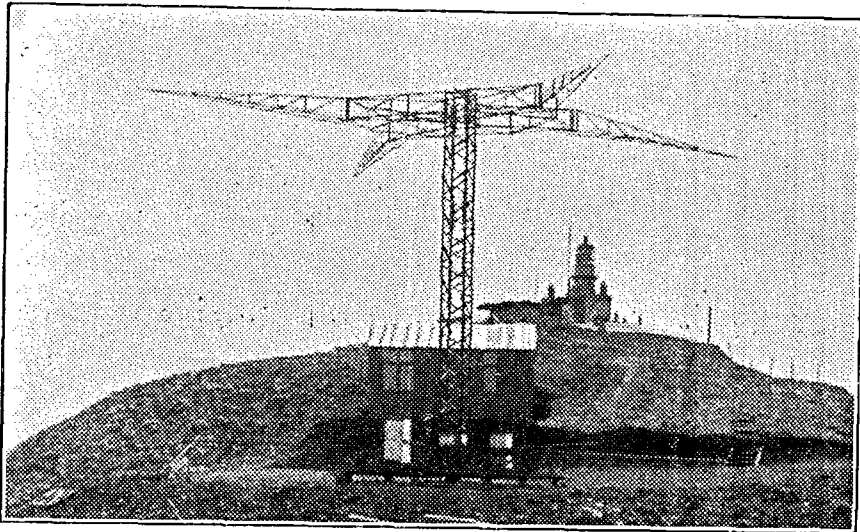
CHILDREN'S NEWSPAPER

September 6, 1924

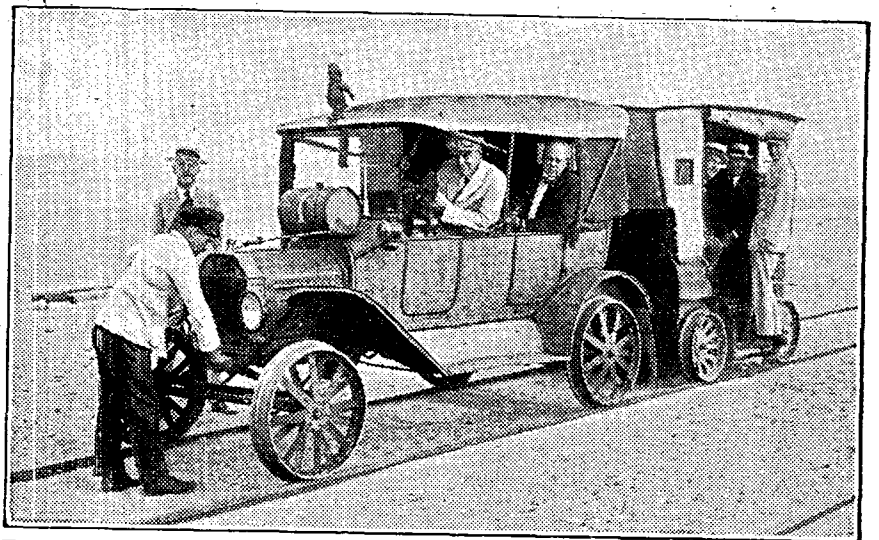
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THE WIRELESS LIGHTHOUSE · A NEW PETER PAN · MILK TANK FOR LONDON



The Wireless Lighthouse—The reflector at Inchkeith, in the Firth of Forth, which by means of a wireless beam sends out warnings in certain given directions to guide ships during a thick fog



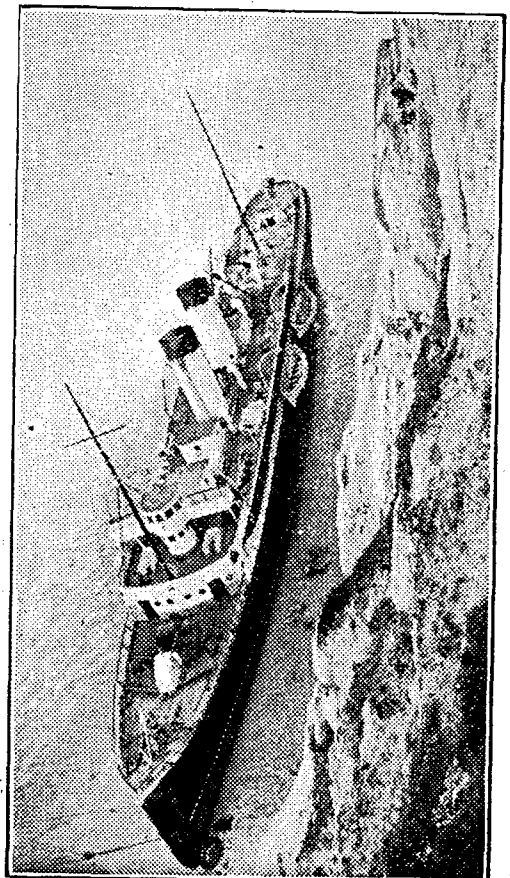
Transport in the Chilean Desert—Cars which run on rails and provide a useful transport system across the dreary nitrate deserts of Chile. By running on rails the cost is reduced



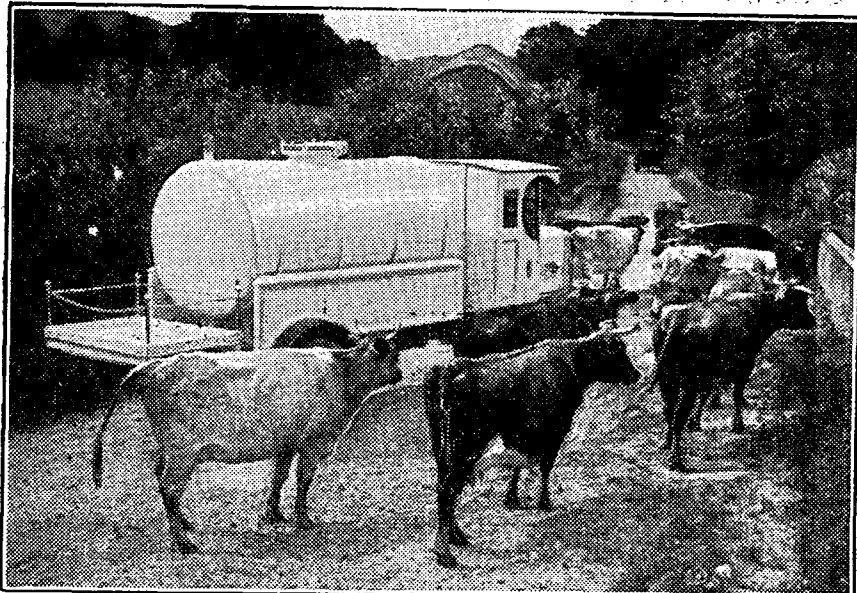
The Tennis Umpire at Work—A little umpire scoring during a shower at the Ryde Open Junior Tournament in the Isle of Wight. She carried out her task well



The New Peter Pan—Miss Betty Bronson, the 17-year-old girl, chosen by Sir James Barrie to act Peter Pan in the film version of the famous play. Sir James Barrie selected her from a film before meeting her



Floating a Stranded Steamer—The cross-Channel steamer Newhaven, which ran aground near Dieppe during a fog. The vessel was refloated later



The Milk Tank Starts for London—This motor tank collects the milk from farms in Hampshire and brings it to London in record time. It is glass-lined, and holds 1250 gallons



Flood Havoc in India—This is not the scene of an earthquake, but shows the havoc wrought by the recent floods in Southern India. Hundreds of villages were almost destroyed

THE GREAT BRITISH EARTHQUAKE—SEE THE C.N. MONTHLY, MY MAGAZINE FOR SEPTEMBER

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